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LAKE TRANSPORTATION STATISTICS.

Dr. George G. Tunell, who was given a commission by the government for the purpose of collecting information and data for a report to the Treasury Department, has made what is considered the most complete report on lake transportation that has been prepared, and it will be laid before congress. The report centers around the grain, flour and ore traffic on the Great Lakes, but it covers also a variety of subjects connected with industries more or less related to lake and railroad transportation. It goes in the history of the carrying trade, both on the lakes and by the great trunk lines, and the report presents, with an exhausted array of figures, the varying fortunes attendant on rate wars between the merchant marine and the carrying trade on land.

It proves that the lake transportation companies have more than regained what they lost in the years intervening between 1873 and 1885.

The picture drawn of the commercial future of Chicago offers, in certain respects, but few opportunities for congratulation. As a center of the wheat and corn raising west and northwest, Chicago is practically between the two horns of a dilemma. On the north the Soo, in connection with the Canadian Pacific Railway system, is gradually eating her vitals, and on the south and west the railroads furnishing at outlet to the Gulf at the ports of New Orleans, Galveston and Port Arthur, are making inroads in corn-carrying traffic.

However, while Chicago has lost some of the wheat and flour trade, with its attendant traffic, it has more than held its own in relation to the ore traffic. As a port of entry for the ore trade of the Lake Superior ports it has had an enormous increase in the last few years. Yet little or nothing of the iron ore has found its way to Chicago by means of the railroads.

There is an unmistakable evidence that the iron and steel industry of the eastern states is on the decline; that the superior quality of the ore from the north has already crowded the product of Pennsylvania, New Jersey, New York and Ohio to the wall. This tremendous change is shown to be due almost entirely to the increased facilities in the transportation of the raw materials from the mines near Lake Superior.

A substitute for the coke of Pennsylvania, if such could be found—and it is hinted in the report that the Illinois Steel Co. has reached a fairly satisfactory solution in experiments with Illinois coal—would sound the death knell of the successful competition of the eastern iron fields. It is shown that it is largely to the developing of the iron mines of Lake Superior that the United States is able to compete with other steel producing countries, not only in home production, but in exporting the finished product to all parts of the world. In a few years it is predicted the enormously rich fields of the northwest will supply the world with iron and steel.

This winter it is expected the Gulf ports will handle a large part of the corn crop of Kansas and Nebraska, and the trunk lines' shipment of that cereal to the Atlantic seaboard will correspondingly decrease. There is some suspicion, though, that the grain shipped by way of the Gulf ports during the wet season is affected by the damp air, that the tran-shipments from land to the holds of the ships must be done expeditiously and carefully in order to land the cargo in good order in foreign markets. Great possibilities in the corn shipment are predicted for Port Arthur on account of its proximity to the corn fields of the great west.

The shorter haul in the west and southwest has a parallel in the north, and this presents a problem that may have to find its solution in legislation by the government. At present the cereal products of the northwest and the ores of Lake Superior have an outlet in the summer through the lake ports on the north, and in the winter the Soo takes the lion's share, at least of the wheat and flour. The freight is carried in bond through Canada and goes either direct to Montreal or connects with New England railroads. It is thus distributed over the northeast without profit to the American transportation lines. During the summer the freight is carried through the lakes to Buffalo in American bottoms. But expected extensions of the Canadian Pacific Railway may rob the American transportation lines of even the haul from Buffalo to the Atlantic seaboard. The report covers only remotely the prospect of the Canadian system extending her lines to the head of the Georgian Bay on Lake Huron, and then carrying the freight overland from a port in that bay. As the eastern extremity of that bay is almost as far east as Buffalo, although farther north it presents great advantages in the saving of time and distance.

Statistics presented by lake transportation statisticians are more or less discredited in the report. It is pointed out that the figures are not always to be relied on, and that in a large number of cases they are biased in favor of the lake companies. Up to 1885 the transportation was unbusiness-like in many of its details, and chaos prevailed, but with the advent of the new type of ships came a reviving of lake traffic and the whole has been systematized.

The war between the railroads and the waterways has been carried on. In 1857 it cost almost 10 cents to ship a bushel of wheat from Chicago to Buffalo. During the season just ended the rates have been slightly over 1½ cents. For the 41 years the average rate is a trifle over 5 cents. Ore has been carried from Lake Superior to Lake Erie for 57 cents per gross ton. On the return voyage coal has been sent from Buffalo to Duluth at a net cost of 15 cents per ton. The railroads have had nothing of this traffic, and Dr. Tunell sees small comfort for the overland trade in the future, except in the short hauls from the grain fields to the lakes. Ore is the principal product, and grain and lumber come in the order named. Particular attention is paid to the growth of the traffic in the ports of Chicago, Duluth Superior, Milwaukee, Cleveland and Buffalo.

The report is looked on at the Treasury Department as of value to commerce and transportation, and it is likely Congress will be asked to make the office of statistician permanent for the benefit of the rapidly-growing inierests of the inland marine.

BRITISH SHIPBUILDING INDUSTRY.

Commenting on shipbuilding in Great Britain during 1897 a contemporary says: "The local returns of shipbuilding in 1897, so far as they have appeared, make it quite evident that the record for that year will be considerably behind that of 1896, which however, exeeded that of any previous year. Belfast, for example, has launched in 1897 some twenty-one vessels, with a tonnage, of 108,863, or 10,000 tons less than the tonnage of previous year. On the Humber, again, there was launched in 1897 only 4,781 tons, against 13,428 tons in the previous year. Many of the leading shipbuilders have been unable to complete their contracts, and some of them have lost as much as five months' work owing to the engineering strike. It will not be surprising if, when the returns for the years are made up, it turns out that 1897 is 250,000 or 300,000 tons behind the previous year."

ENORMOUS GUARD GATES.

An extensive contract undertaken by the government at St. Mary's Falls canal, and to be completed during the closed season of navigation, is the construction of the mammoth swinging guard gates which will replace the movable dam in St. Mary's Falls canal.

The work involves the excavation of approximately 6,000 yards of rock for the gate recesses and the additional depth of the canal at the point where the movable dam is located; the construction of the recesses, which will be of concrete; the building of two mammoth gates, each 32 feet high at the quoin posts, and 61 feet in length, and the installation of machinery for their operation. All this has to be finished by the opening of navigation this year, in order to be of service, and do away with the present obstruction to navigation in the canal—the movable dam and its mitre-sill—which were installed when the Weitzel lock was built and before the channel was deepened to 21 feet.

The cost of the undertaking will probably be not far from $70,000.

The gates will be the largest of the kind in the world. The width of the canal at the point that will be installed is about 108 feet, which is 8 feet wider than the new lock. The gates are being built of Oregon fir. Their upper portion for 8 or 10 feet will consist merely of open frame work, to permit of the natural flow of water when the locks are being filled. In case of accident to the lock, sufficient of the flow would be shut off by the solid portion of the gates to prevent serious damage, and in case of necessity the open part of the new gates could be planked over without difficulty, and the flow shut off entirely as with the movable dam now in use. The type of machinery to be used in operating the gates has not yet been definitely determined upon, but it is altogether likely that electrical machinery will be installed.

THE NICARAGUA CANAL OUTLOOK.

As the net registered tonnage that passed through the American and Canadian locks at the Sault Ste. Marie, or in and out of Lake Superior, during this season of seven months has been 18,218,400 tons; and as the net registered tonnage through the Suez canal has never in one calendar year been equal to 9,000,000 tons, but has for three or four years exceeded 8,000,000 tons; and since the Nicaragua canal would afford a shorter passage to the Atlantic coast of Europe from Japan, China and Australia than does the Suez canal, the New York Mail and Express finds it easy to believe that the traffic between Europe and the Pacific, combined with our foreign traffic with the Pacific, will equal the entire traffic of the Suez canal; nor can any one doubt that the coasting trade for a full year between our Atlantic and Gulf coast on the one hand with the coast of California, Oregon, Washington and Alaska on the other, will at least equal the trade in and out of Lake Superior during a seven months' season. The Nicaragua canal, therefore, argues the Mail and Express, ought to be constructed so that it will conveniently pass at least25 ,000,000 tons of shippingper annum.

The New York daily is surprised at the opposition to the construction of the canal by a certain class of newspapers but hazards the likely explanation that the facts that about 94 per cent. of the tonnage in and out of Lake Superior is under the American flag, and 89 per cent. of the entire tonnage on the lakes has been built in American shipyards, because the bulk of the trade upon the lakes is a coastwise trade of the United States, and neither British nor Canadian built vessels are permitted to participate in it. So, likewise, all of the trade between our Atlantic, Gulf and Pacific coasts ports through the Nicaragua canal would be a coasting trade, and those vessels only could engage in it that are built in American shipyards and manned by the American seamen. Such vessels would soon be doing the bulk of the carrying through the new canal, with a great consequent loss to British maritime interests.

THE sale of the steamers Pennsylvania, Ohio, Indiana, Illinois and Conemaugh by the International Navigation Company to the States Steamship Company for the Pacific trade leaves but five steamships flying the American flag crossing the Atlantic Ocean. They are the St. Paul, gross tons, 11,629.21; St. Louis, gross tons, 11,-629.21; New York, gross tons, 10,802.61; Paris, gross tons, 10,794.86; Evelyn, gross tons, 1,963.44. The latter three built in English shipyards and denationalized.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to The Marine Record.

There is no change in grain freights, 2⅝ cents on corn to Buffalo, being the ruling figure.

Capt. J. S. Dunham is having the decks repaired and recalked on his schooner A. Mosher.

The steamer Iosco will receive a thorough overhauling and repairs at Milwaukee after her stranding experience on the last trip.

The annual ball of the Milwaukee branch of the Marine Engineers' Beneficial Association will take place at the Masonic Temple on Jefferson street, January 14.

Capt. Thos. J. Higgins was initiated as a new member of Chicago Harbor, No. 33, of the Masters' and Pilots' Association.

The Goodrich Transportation Co.'s steamer Iowa was towed by one of Dunham's tugs to Miller Bros.' dry dock, Tuesday morning, to receive a new wheel.

Capt. John Prindiville chartered the steamer J. H. Wade for rye, and the steamer Wm. Chisholm for corn, for winter storage and delivery at Buffalo at 2⅝ cents.

The steamer Samoa and barge have obtained the best freights so far for winter storage and delivery at Ogdensburg of corn at 5 cents. They were chartered and loaded about the middle of December.

At a regular meeting of the Lake Seamen's Union, held last week, William Penje was elected delegate to the Lake Carriers' Association annual meeting to be held in Detroit on January 19.

The Dunham Towing Co. towed the steamers Raleigh and Wm. Chisholm to elevators to load grain, the steamers Minneapolis and Venezuela, which arrived on Saturday and Sunday, from Milwaukee, to lay-up docks.

The Independent Tug Line towed the barges Iron Cliff and Iron City to elevators to load grain, and the steamer Aurora, which arrived here from South Chicago on Monday, to lay-up at dock. The Line have their tug A. G. Van Schaick in their floating dry-dock for a general overhauling.

Burger & Burger, Manitowoc, have the Goodrich line steamer City of Ludington in their stationary dry dock for lengthening, rebuilding and extensive overhauling. Her Corliss marine engine will be replaced by a fore and aft compound now under construction at Detroit, by the Dry Dock Engine Works.

The Milwaukee branch of the Shipmasters' Association elected officers for the ensuing year as follows: President, Henry Leisk; vice presidents, John McCoy and Peter Anderson; secretary, John McSweeney; treasurer, F. C. Starke; marshal, Daniel Sullivan; warden, Fred Schwerman; chaplain, William Jamieson; sentinel, James Bruce; trustee for three years, James Leisk.

At a meeting of the Chicago Lodge, No. 3, of the Shipmasters' Association, held at their hall Wednesday afternoon, December 29th, the following officers were elected for the year 1898: Capts. C. H. Hubbard, president; L. B. Coates, 1st vice president; Fred. T. Weimar, 2d vice president; Wm. W. Shaw, treasurer; Frank B. Higgie, secretary; John Jenks, delegate to the meeting of the grand lodge at Milwaukee.

At a meeting of Chicago Harbor No. 33, of the American Association of Masters and Pilots, held at their hall at the Le Grand hotel, Thursday afternoon, December 30, last, the following officers were elected for the year 1898: Capt. John Jenks, captain; Capt. L. B. Coates, 1st pilot; Capt. Wm. Brown, 2d pilot; Capt. James Grion, purser; Capt. Geo. Tebo, captain's clerk and delegate to Washington at the Grand Harbor convention to be held at Washington on January 17.

Branch No. 6, Milwaukee Shipmasters' Association, met last week in annual session for the election of officers. The entertainment announced for the night of January 27, at the Masonic Temple on Jefferson street, will be in the nature of a reception and banquet, followed by dancing. Members of the committee of arrangements are Capts. James Leisk, W. E. Wright, John McCoy, Fred. C. Starke and Peter A. Anderson; floor committee, Capts. E. B. Marquette and Charles E. Moody.

P. J. Navaugh, of Chicago, formerly an engineer on tugs in the Toledo harbor, and last season chief engineer of the steamer Caledonia, says that the Lake Carriers arranged with railroads leading into ports along the lakes for reduced rates during the spring and fall for employes to go from any place to their home ports. Mr. Navaugh received a reduced rate ticket from Chicago to Toledo, but when he tried to get a ticket at Toledo at a reduced rate he was unable to do so. The tickets are issued good to the beginning of the new year and he was within the limit of time allowed.

At the shipyard here the steamer Niko is in dock receiving 118 feet of new keel, thirty-seven new bottom planks, ten new main deck beams and new deck, new hatch coamings, new stanchions, bulwarks, covering board and rail all around, general repairs and calking all over. The steamer John Emery Owen received three new deck beams, some new upper deck and new hatch coamings. The steamers Bermuda, Geo. N. Orr and J. J. Barlum, and the canal boat Isabel for calking. The steamers Iowa, Kalkaska, and schooners Golden Age, Churchill and Winnie, and tug Dennis Brothers, are waiting to be docked.

The stocks of grain in Chicago elevators on last Saturday evening were 11,143,000 bushels of wheat, 18,300,000 bushels of corn, 1,386,000 bushels of oats, 599,000 bushels of rye, and 813,000 bushels of barley. Total, 32,250,000 bushels of all kinds of grain, against 26,090,000 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 38,816,000 bushels of wheat, 38,421,000 bushels of corn, 12,337,000 bushels of oats, 4,055,000 bushels of rye, and 4,348,000 bushels of barley. These figures are larger than the corresponding ones of a week ago by 2,200,000 bushels in wheat, 271,000 bushels in corn, and smaller by 435,000 bushels in oats. The visible supply of wheat for the corresponding week of a year ago increased 208,000 bushels.

Fred W. Martin the well known yacht designer of North Chicago, Ill. (formerly Racine, Wis.) has just completed that much talked of and written about gold dredge which is to be built for a Chicago syndicate for use on the Yukon river bottom.

The vessel is a stern paddle wheeler 60 feet long and 14 feet molded beam, and 17 feet across the guards, with a main draft of 12 inches and 18 inches maximum draft with full mining equipment, provision stores, etc., for a crew of ten men.

She will be fitted with a pair of 8x36 horizontal high pressure engines and extra large fire box marine boiler, which latter shall feed an independent vertical engine forward driving a centrifugal pump which shall pump the sand and gravel containing the gold from the bottom and throw it into two sluice boxes one on either side on the outside gaurds, when the natural sheer of the vessel, although but little, gives the necessary drainage to wash out the gold.

The vessel will have no superstructures except a cabin of sufficient size to comfortably house the crew aft, the balance of deck forward to be given up to the mining machinery and will simply have a canopy and a small pilot house on top.

The vessel will be fitted with stake anchors (four in number) to hold her in position while in operation.

Mr. Martin has made a number of designs for Klondike parties among them a passenger steamer for coast service, and is also building some knock-down flat bottom craft knocked-down for the Yukon, but he considers this one described the most unique of the entire lot.

BUFFALO.

Special Correspondence to The Marine Record.

The steamer Leland has been libeled here on a claim for supplies amounting to $263.50.

With the arrival of three steamers on Dec. 22nd, navigation was suspended at this port for the winter.

The steamer Corona has been libeled and the case set for hearing in Utica January 18. The claims are $409 for fuel, $100 wages and $1,205 for materials furnished the vessel.

The total coal carried through the Sault Ste. Marie canals in 1897 was 536,199 net tons of anthracite and 2,492,973 net tons of bituminous, as compared with 397,210 and 2,626,130 net tons, respectively, in 1896, and 440,477 and 2,133,885 net tons in 1895.

A suit for damages has been brought against the Great Lakes Steamship Co. on account of the death of E. S. Bedell, a Manitowoc farmer, who was killed last summer at this port by falling through a hatchway on the steamer John W. Moore while on an excursion to the G. A. R. encampment. G. G. & C. H. Sedgwick, of Manitowoc, are attorneys for the plaintiff. The case will be tried here.

Williams, McNaughton & Bapst, the contractors who have the work of the canal enlargement between Buffalo and Lockport, promise to have the work completed before navigation opens next spring. On Monday last they finished the job of pumping out the level between Austin street and Tonawanda and the work of putting in the piling will begin at once.

In the municipal court last week testimony was heard in an action brought by Michael McLaughlin, a mate on the schooner Nassau, against John Dorrington, captain of the schooner, for $300 for alleged assault. McLaughlin claims that on Nov. 20, on the high seas, Dorrington choked him without provocation and threw him down on the deck of the vessel, permanently injuring his left arm and otherwise maltreating him. He says he has been under the care of a physician ever since. Dorrington was recently apprehended by the United States authorities for this alleged assault and held in $2,500 bonds for trial at the Auburn term of the federal court.

Messrs. David Vance & Co., Milwaukee, has issued cards showing the capacity of the grain carrying fleet in winter quarters at Milwaukee from which it appears that there are fifty steamers which can carry an aggregate of 3,545,000 bushels of wheat. The L. C. Waldo is listed to carry 175,000 bushels. The Maryland and Fred Schlesinger 110,000 bushels each, several other boats at 100,000 and running down to two boats at 30,000. The schooners, or sail capacity is given as 1,185,000 bushels ranging from the schooner or tow-barge Antrim 175,000 bushels down to a 20,000 bushel cargo carried in thirty-one vessels. The total capacity therefore at Milwaukee this week is 4,730,000 bushels.

DETROIT.

Special Correspondence to The Marine Record.

Quite extensive repairs are to be made on the steamer Wallula at this port during the winter.

The Detroit Dry Dock Engine Works will furnish a new fore and aft compound engine with cylinders 20x40 inches in diameter and thirty-six inches stroke for the Goodrich liner City of Ludington whose name will be later changed to the Georgia. A boiler formerly in the Atlanta will be placed in the Georgia.

The Donnelly Wrecking & Salvage Co., Kingston, Ont., has purchased the Canadian side-wheel steamer Cambria, which suffered heavy damage early last fall by stranding on the Canadian side of the St. Clair river entrance and now lies at Port Huron. She is to be taken to Kingston for repairs on the opening of navigation.

The steam scow S. E. Curtis has been libeled at this port by Don. C. Curtis, $300; Edwin C. Curtis, $173; Wm. Bragg, $350 and Henry N. Bottsford for $83.72. A hearing will be held in the csse at this port next Tuesday, Messrs. Leonard and Whipple are proctors for libelants.

Proposals were received on Monday last for the supply of furniture for the use of the marine hospital, Doctor Godfrey is the surgeon in charge here to whom all bids were submitted by those who were made acquainted with the fact that the furniture was required.

Capt. James Davidson, of W. Bay City, carried no insurance on his wooden fleet this season and towards the close of the season assumed the risk himself on ship, freight and cargo. This because it was likely that he could not have got any firm to carry it on the latest trips.

The Shipmasters' Association, Lodge No. 7 of this city has issued invitations to their fifth annual ball. The entertainment committee will endeavor to make the coming event more successful, if possible, than any of their former parties, the ball will be held at Strastbury's Academy on Wednesday evening, Jan. 19. Capt. M. G. McIntosh is chairman of the committe on entertainment.

Senator McMillan will make a special effort to have passed at the present session of Congress a bill for a cable from Glen Haven to the South Manitou Island. In a letter to the Senator, D. H. Day, of Glen Haven, urged as an argument in favor of the cable the stranding of the steamer Gogebic on North Manitou Island during the latter part of November. In order to secure assistance a crew rowed ashore in a yawl in a northwest gale at a great risk of their lives, and in all the time operations for her release were being conducted the cable would have been of great service. Another argument in favor of the cable is the great desirability of being able to telegraph to the mainland the names of vessels which have taken refuge from storms. Senator McMillan will endeavor to have his measure engrafted on a suitable appropriation bill.

The Detroit Dry Dock Co.'s steel plant at Wyandotte will be a busy place this year. The full force of between 500 and 600 men will be put to work in the near future. There are four steamers to be built early this season. The new C. & B. passenger steamer is well under way. The frames are all up and the beams in place. Work is being pushed rapidly although there has been some delay in the steel shipments from the manufacturers. The plans for the Dunbar & McMillan boat are finished and work will be pushed rapidly. The blocks for the keel of the new 400-foot steamer for the Western Transit Co., Buffalo, are all in place and work has also begun on her. A sister craft of the Dunbar & McMillan boat will also be built during the winter. Many improvements have been made in the plant during the past year and Supt. Kirby says it is to-day a model shipyard in every respect. Much of the work is now done with pneumatic tools, some of them Mr. Kirby's own invention.

CLEVELAND.

Special Correspondence to The Marine Record.

Mr. John Craig, shipbuilder, Toledo, visited Cleveland this week on business.

William Lawrence, late chief engineer of the steamer John N. Glidden, was drowned at Sandusky Friday while ice boat sailing. The body was recovered.

The comparatively mild weather experienced at mid-winter this season, makes people think of the early spring that is likely to be floating around here a few weeks hence.

The sale of four million tons of iron ore by a Cleveland dealer for delivery at Cardiff, South Wales, which was telegraphed all over the country, has proved a canard. A Pittsburg source, it appears, is responsible for the hoax.

Iron ore matters relative to sales and shipments from docks and next season's business is apparently holding off just now, owing perhaps to the holidays, although business is generally slack in iron ore circles at this time of the year.

Mr. H. M. Hanna, President of the Globe Iron Works Co. is at present ill, and staying at his residence in Thomasville, Ga. Cleveland physicians have been called to attend him, and an operation will be performed with the hope of his speedy recovery.

The new dry dock of the Cleveland Ship Building Co. at Lorain, will be ready for work in about two weeks, and as there is a number of large steamers waiting to be docked all the help that can work to advantage is now engaged on full time.

The Menominee line steamer Saxon was the first entry at Ashtabula harbor for the year 1898. After being in dry dock at Cleveland Capt. Goodsell received orders to take the Saxon to Ashtabula and place her in winter quarters at that port. No difficulty was experienced through loose ice on the passage down, or in making the port on her arrival.

Mr. C. H. Keep, Secretary of the Lake Carriers' Association, has issued calls for the annual convention which is to be held at the Hotel Cadillac, Jan. 19. The convention will be one of the most important in the history of the association. There are questions to come up at the annual meeting that will interest every vessel owner on the lakes.

One of the most attractive calendars of the season, is that sent out this week by the Cuddy, Mullen Coal Co., miners and shippers of steam coal, also fueling departments at this port, Amherstburg and at Detroit. It is to be hoped that this firm has a sufficient number of these handsome "mind joggers" to go around all of their numerous patrons.

Many friends of Mr. Walter Miller, formerly of the Globe Iron Works Co., and now occupying a suite of offices in the Western Reserve Building, will be sorry to learn that he has

been somewhat under the weather for several days past. It is now known that Mr. Miller is on the way to convalescence, and no doubt he will be around again in a few days, attending as usual to his many business calls and duties.

Mr. Robert Logan, marine expert, surveyor and consulting engineer, has been out of town all week, having been called to Kingston to survey the damages, and estimate the value of hull, cost of repairs etc., on the Clyde-built steamer Rosedale, recently stranded on Charity Shoal, at the head of the river St. Lawrence, eventually released by the Donnelly Wrecking Co., and towed to Kingston to go into dry dock.

The following is the report of the number of patients treated by E. A. Carmichael, surgeon of United States marine hospital service, at this port, during the fiscal year ended June 30, 1897: Hospital patients, 358: out patients, 1,324; number of times relief was furnished to out patients, 2,037; number of days' relief furnished in hospital, 8,599; number of patients died, 7.

Mr. Duncan Fraser, shore engineer for the Bessemer Steamship Co., was enabled to spend the holidays at home, owing to the early laying up of the large fleet, the machinery of which he supervises. There are but few engineers of such sound practical common sense and thorough training in mechanism as Mr. Fraser, and the Bessemer Line done well in securing his services after he left the Northern Line.

Capt. Frank Ray, of Vermillion, is slated to take charge of the Empire City next season and Capt. R. J. Lyons will superintend the construction of the new steamer building by the Cleveland Ship Building Co. to the order of the Zenith City Transportation Co., Duluth, taking charge of her when completed. The name Garden City has been mentioned as fitting numbers under which the new craft might be registered.

The Cleveland-Alaskan Gold Mining & Milling Co. had shipped to their order to Ballard, Wash., this week, a Scotch type boiler 9 feet by 11 feet, built by the River Machine & Boiler Works, Messrs. Teare & Thomas, proprietors. Messrs. Clough, Witt & Co. are building a set of engines for the same company, to be shipped and placed in a steamer 132 feet in length, now building at Ballard for prospecting on the Yukon.

The powerful wooden steamer Aurora, owned by Mr. John Corrigan, had the distinction of carrying the last cargo from Lake Erie to Lake Michigan during the season of 1897, leaving Toledo on Dec. 23 with coal for Milwaukee, where she arrived well. Boats owned by Mr. Gilchrist of this port, and Capt, James Davidson of West Bay City, were also among the latest carriers for the season, but the Aurora, a Cleveland-built steamer holds the record for the latest cargo.

The admiralty cases assigned for January in the U. S. district court, northern district of Ohio, eastern division, Hon. Augustus J. Ricks district Judge, numbers altogether on the docket 54. It should be noted that in cases wherein parties are in default, judgments may be entered without regard to assignment; and cases where no proceedings have been had within two years, are dismissed for want of prosecution. In the 54 cases on the docket, it is probable that only a minority of them will come before the court, as the others are or will be settled by mutual agreement. Two cases which will likely last over the next two weeks is the Lake Superior Iron Co. vs. steamer L. C. Waldo, collision, Goulder & Holding, for libelants, and George Clinton, John C. Shaw and Wm. B. Cady for respondents. The other case is Chas. Hughes vs. steamer Post Boy, wages claim, Thos. C. Willard for libelants, and O. C. Pinney Esq., proctor for respondents.

The Lorain city council is wrestling with the subject of keeping the river open duing the winter, so as to prevent an overflow or wash-out in the spring. If Lorain is to take due advantage of the opportunities now offered to facilitate shipping, and by so doing make a large prosperous port out of itself, there should not be a second thought regarding the matter of incurring a trifling expense. Already Lorain has the Johnson Works and the Cleveland Ship Building Co's. shipyard, dry dock etc., and if any more industries are wanted a liberal spirit in the expenditure of necessary funds should be evidenced. A picayunish policy at this time will only tend to retard the growth of that promising little city, and the wave of progress might also, therefore, pass over it, and away to the beyond, not to recurve so as to get back again for another decade or two. Vessels were built there a long, long time ago, but its business affairs got stuck in the mud, and the experience need not be repeated at this time.

Mr. Frank Morrison, compass adjuster and manufacturer of nautical instruments, has about completed a very successful season from a business standpoint. Mr. Morrison has now the bulk of the lake work, and from what I hear his adjustment of compasses, even under the most trying conditions give eminent satisfaction. On the adjustment of the compasses of the revenue cutter Gresham, built this season by the Globe Iron Works Co., Mr. Morrison was complimented by the naval officer in charge, on the efficient and skillful manner in which the adjustment was carried out, and the managers as well as masters of the principal lines are, as a rule, well satisfied with the thorough, careful and painstaking work given their vessel compasses by Mr. Morrison. A large stock of binnacles, compasses, patent logs, barometers etc., will be manufactured during the winter months to supply the new tonnage, under construction at lake shipyards.

FLOTSAM, JETSAM AND LAGAN.

The steamer American Eagle made her last trip between Sandusky and the Islands Tuesday. She will be laid up at Sandusky.

The season of navigation at Two Harbors lasted 243 days this year. The longest previous period was in 1894, when the season lasted 227 days. The total number of arrivals and clearances at Two Harbors for the season was 989, as compared with 953 for the season of 1896.

The car ferry steamer Ann Arbor No. 1 arrived at Menominee Tuesday and reported that the ice in Green Bay offered little resistance to her passage. The steamer took away a full complement of loaded railroad cars.

The car ferry Shenango No. 2 arrived at Muskegon Wednesday morning on her initial trip from Milwaukee with ten cars. The trip was made from pier to pier in 6 hours 25 minutes. The boat will run daily now.

The car ferry steamer Ann Arbor No. 2 is at Manitowoc, having her topsides recalked and other necessary work done. The two boilers for the forward engine, which have not been in use for some time, are being taken out and will be dispensed with altogether.

The largest casting ever made on the Great Lakes was poured last week at the Excelsior foundry, at West Bay City. It was a bed plate for a quadruple expansion engine to be placed in the Bessemer steamship building at F. W. Wheeler & Co.'s yard. The plate is 26 feet long and 13 feet in width and weighs 24 tons.

The car ferry Ste. Marie did not make her customary trip from St. Ignace to Mackinaw City Sunday night, because the ice in the straits moved with force into Lake Michigan. One year ago the steamer, in attempting to make her regular trip, became fast in the ice and remained 36 hours. In making an extra trip from St. Ignace Wednesday morning, she became stuck in the ice and was carried about seven miles out of her course.

It is reported that Lloyds, the British insurance agency, has presented Mrs. Captain Reed, late of the American hellship T. F. Oakes, with a medal for her bravery during the recent long passage of that vessel from Hongkong to New York. It is now in order for Lloyds to place itself on record regarding the scurvy-stricken seamen of the Oakes, who, but for Mrs. Captain Reed's "bravery" would not have suffered as much as they did.—Coast Seaman's Journal, San Francisco.

The Globe, Toronto, published on Saturday last several cuts, accompanied with a biographical sketch of several of the prominent men engaged in the Canadian lake trade. Mr. W. E. Redway, M. I. N. A., marine architect and consulting engineer, who supervised the construction of the Knapp marine roller at the Polson shipyard and has otherwise been engaged on important work, is the subject of a very interesting sketch. Capt. Andrew J. Tymon and Capt. J. J. Quinn also contribute in the Saturday issue to make the biographies, written by Mr. John A. Copland for the Globe, a pleasant feature to all marine men.

The Milwaukee Tug Line are figuring on building a powerful harbor tug, and the intention is to make her the equal of any harbor tug on the lakes in the matter of construction, power and equipment. The contract for the hull has not yet been placed, but her principal demensions will be 93 feet over all, 21 feet beam and 12 feet molded depth. The Sheriffs Manufacturing Co. is to build the engine, which will be a triple expansion with cylinders 14, 22½ and 36 inches diameter and 30 inches stroke. The boiler, which will be of the Scotch type, 12 feet long and 10 feet in diameter, with a guaranteed working pressure of 185 pounds of steam, is to be built at the Manitowoc Boiler Works. It will be provided with forced draught apparatus. Every appliance about the craft is to be of modern and approved type and nothing of an experimental nature will be considered in her outfit or equipment.

WINTER MOORINGS.

BUFFALO.

The winter fleet laid up at Buffalo is as follows: North Land, North West, North Wind, North Star, Northern Wave, Northern Light, Northern King, Montana, Arabia, Harlem, Badger State, Empire State, Chicago, Mohawk, Vanderbilt, Japan, India, China, Alaska, Lycoming, Wissahickon, Lehigh, Juniata, Gordon Campbell, Owego, Chemung, Ramapo, Rochester, New York, Tioga, Seneca, Saranac, E. P. Wilbur, Tacoma, R. A. Packer, H. E. Packer, Clyde, Chili, Russia, Lackawanna, Wyoming, Arthur Orr, Portage, Avon, Eber Ward, J. V. Moran, J. M. Nicol, James Fisk Jr., W. H. Stevens, Nebraska, John Pridgeon, Jr. W. F. Sauber, J. C. Lockwood, R. L. Fryer, C. H. Green, Oscoda, Ed Smith No. 1, George Presley, Italia, Caledonia, George T. Hope, W. M. Egan, J. Plankinton, S. P. Fitzgerald, Gladstone, Pine Lake, Shenandoah, Empire City, Zenith City, Kearsarge, Thomas Davidson, Norwalk, S. C. Baldwin, J. B. Colgate, Rhoda Emily, Alva, lighter McCormick, Lizzie Madden, Schoolcraft, J. B. Ketcham (No. 2), Wotan, S. S. Curry, America, Lewiston, E. M. Peck, C. Hurlbut, Pasadena, Neshoto, Tom Adams, R. Mills, Centurion, Sacramento, Rappahannock, M. B. Grover, Onoko, George Stone, A. L. Andrews. Schooners:—Mongaugon, Typo, A. J. Rogers, G. G Hougton, Kate Brainerd, Noquebay, Amazon, Ishpening, J. C. Fitzpatrick:—Columbian, Our Son. Whalebacks 104, 133, 134, Moravia, S. Minch, Aberdeen, F. B. Gardner, Ogarita, Oak Leaf, T. H. Cahoon, C. Wall, Tailor, Commerce, Herschel, Armenia, Zapotec, Ida Corning, C. G. King, M. Butman, A. A. Carpenter, George Nester, M. S. Bacon, M. A. Bourke, Penokee, C. L. Young, West Side, Delos De Wolf, M. W. Page, Genoa.

The list covers 97 steamers, of which 52 are regular liners, 40 are barges and schooners, making a total of 137 vessels,

MANITOWOC.

Manitowoc has a fleet of forty vessels, steam and sail, the names of which are as follows:

Steamers—Black Rock, A. Carnegie, Cumberland, Columbia, J. Craig, H. D. Coffinberry, T. S. Christie, C. W. Elphicke, J. F. Eddy, C. A. Eddy, G. Farwell, Hiawatha, J. J. Hill, Hesper, J. B. Lyon, S. J. Murphy, J. W. Moore, Oregon, Queen of the West, Rube Richards, V. Swain, R. F. Schuck, Spokane, H. W. Sibley, C. Tower, Jr., Waverly, Wawatam.

Schooners—H. D. Alverson, W. S. Crosthwaite, S. H. Foster, F. A. Georger, H. A. Hawgood, Moonlight, May Richards, Rosa Sonsmith, H. W. Sage, T. P. Sheldon, Verona, S. L. Watson.

Capacity of steamers, 1,870,000 bushels; of sail vessels, 555,000 bushels. Grand total, 2,425,000 bushels.

THE WHALEBACK TYPE FOR CANAL TRADE.

In support of the Lake Erie and Ohio river ship canal project Capt. Alex. McDougall has furnished Congressman Dalzell with some particulars to lay before Congress. The inventor of the whaleback states that there are 35 whalebacks in the lake trade. About half of them are 262 feet long, 36 feet beam and 22 feet depth of hold; their turrets, one at each end, are elevated above this 22 feet 6 inches. The remainder of the fleet are from 300 to 340 feet long. The first named are intended to be of the size to accommodate the new Canadian canals, which are now being built at a cost of about $60,000,000. We think our type of vessel draws less water (consorts when loaded drawing 13½ feet, and can load to 18 feet) and cost of transportation by them is cheaper than any other class of vessel already in use. A steamer towing two consorts makes the round trip from Duluth to Ashtabula in about 12 days with a cargo of about 6,500 tons in the three.

My idea of yonr canal system from the lakes to Pittsburg is that it would not be necessary to have the locks larger than the Canadian canals, which are of uniform size, 270 feet long, 45 feet wide, and 14 feet depth. In the future a great many vessels will be adapted for this trade, and the difference in cost on their 14 feet draft and that of the 18 feet draft aimed at by our deep lake channels will be very slight, when steamers and barges are fitted specially for this purpose. I think a steamer and two consorts that will fill locks of the size you have adopted can be made to carry very nearly as cheaply as anything that will ever be built for short runs like the lake, river and canal systems.

In regard to the cost of operating expenses of steamers and consorts 262 feet long, 36 feet beam and 22 feet depth of hold, Capt. McDougall says:

"They would cost about $42 per ton of their carrying capacity, with sufficient power in the steamer to tow two consorts, loaded, eight miles an hour, or without cargoes, nine and one-half miles an hour. It would cost to operate them in the lake trade about $42,000 per year, including all insurance, repairs and management, but not the cost of handling the cargo. The figures and cost given you here would apply to smaller boats nearly in proportion, either for a 12-foot draft or less if the boats were designed for that special size.

"Suppose a whaleback steamer and barges adapted to the canal and lake trade be engaged in the ore and coal traffic between Duluth and Pittsburg. The following would fairly represent their earning power:

	HOURS.
890 miles lake, at 7 miles per hour	127.14
130 miles canal, at 4 miles per hour	32.25
33 locks, at 20 minutes each	11.00
2 days at terminus, loading and unloading	48.00
Total	218.39
Round trip, hours	436.78
Round trip, days	18.20
Number round trips in season, 220 days	12

"A round trip cargo would consist of 5,893 gross tons of ore and 6,600 net tons of coal. The twelve round trips per season would result in carrying 149,916 tons of freight. Allowing the rate on ore in 1894, Duluth to Ashtabula, 80 cents, and one mill per ton per mile on ore and coal through the canal—13 cents—and coal rate, 1894, Ashtabula to Duluth, 37½ cents, this would make the round trip receipts on ore 93 cents, and deducting therefrom 18 cents for handling ore and trimming vessels, ore receipts would be 75 cents per ton, and on coal, 50½ cents per ton.

Receipts on ore each trip, 75 cents	$4,419.75
Receipts on coal each trip, 50½ cents	3,316.50
Round trip receipts	$7,736.25
12 round trips per season, receipts	$92,835.00
Cost of operating per season	42,000.00
Profit	$50,835.00

"Taking as a basis our smaller class of whalebacks, 264 feet long, it would cost about the same to operate steamers or consorts up to the 340 feet; and I think it would cost no more to carry cargoes by lake and canal with a much smaller vessel than 264 feet long, if specially made of a standard size and adapted for the canal and lake trade. We are to-day building in our yard four large ships of the whaleback type, of the following dimensions: One 404 feet, two 380 feet long, and one 360 feet long; but I do not expect to get any better results from them than the last steamer we turned out, which has to her credit the best record ever made, and she is only 320 feet long."

VESSELS CLASSED.

The following vessels have been classed or rated this week by the American Shipmasters' Association, New York in the "Record of American and Foreign Shipping:" Screw steamer, Goldsboro; barque, Grace Deering; half brig, Havilah; barge, Indian Ridge; and three masted schooner, Sarah D. Fell.

MARITIME LAW.

THE W. H. SIMPSON.

Circuit Court of Appeals, Seventh Circuit, May 3, 1897.

TOWAGE—DUTY OF TUG.—A tug is neither a common carrier nor an insurer, nor is the highest possible degree of skill and care exacted of her. She is bound to exercise reasonable care and skill in the performance of the duty assumed, and failure therein is a gross fault, creating liability for resulting injury to the tow.

SAME—PRESUMPTIONS.—No presumptions of negligence on the part of the tug arises from the mere fact of an injury to her tow, and the burden of proof is upon the tow to show by the evidence and the resonable probabilities of the case that the tug was guilty of the fault charged through failure to exercise ordinary skill and care.

SAME—COLLISION OF TOW WITH DOCK—EVIDENCE.—Evidence and circumstances held insufficient to show that the collision of a schooner in tow of a tug with a dock in the harbor of Milwaukee was due to the negligence or want of skill and care of the tug.

Appeals from the District Court of the United States for the Eastern District of Wisconsin.

The schooner F. W. Gifford sailed from the port of Chicago on the 8th day of April, 1894, laden with a cargo of 29,000 bushels of corn, bound for Port Huron. She was a vessel of 400 tons burden, 151 feet in length and 31 feet beam, and with her cargo on board drew 12 feet and 6 inches. During the night a severe northeast storm sprung up, with a high sea, causing the vessel to labor heavily, and at 4 o'clock in the morning it was discovered that the forward pump was broken and rendered useless. She was then about 30 miles north-east by east from the port of Milwaukee, and was put back from that port. When four or five miles distant from the piers of the straightcut harbor at Milwaukee, she signaled for a tug, which signal was answered by the steam tug W. H. Simpson, the latter vessel reaching her about a mile east or south-east of the piers. The tug was 67 feet in length, between 17 and 18 feet beam, and had steam steering gears. At this time there prevailed an easterly gale, accompanied by rain and sleet, the strength of the gale being variously estimated at from 30 to 40 miles an hour, with a heavy sea which washed over the harbor piers, causing a swell of 4 feet running between the piers. These harbor piers extend easterly and westerly and are 1,800 feet in length. The width between the piers is 260 feet. The distance from the west end of the piers across the Milwaukee river, which here runs about north and south, is 550 feet. Benjamin's coal dock is situated on the west bank of the Milwaukee river, nearly opposite the entrance of the piers. The light-house is located on the north pier, about 600 feet from the easterly end of the pier. The life-saving station is south and at the westerly end of the south pier. The schooner passed a line to the tug out of the chock on the port side, which was made fast on the tug. This line was about 250 feet in length between the vessels, which was a proper length of line for towing in the then condition of the sea. The line was 6½ inches in circumference, in good condition, almost new, and in all respects a proper line for the purpose. Upon making fast, the tug proceeded with her tow, distant from 15 to 20 feet on the port side of the schooner. Upon entering the jaws of the piers the schooner lowered her canvas. This being done, signal was given by the tug to stand by and to shorten the towline. This was about opposite the light-house. There is much conflict in the evidence with respect to the number of men upon the schooner who were employed in taking in the line, the one party asserting and the other denying that a sufficient number of men were engaged in that work. At all events, the schooner signaled that she could not get in the line, and that the tug should go ahead, which she did, picking up the slack of the line. A second signal was given to haul in the slack when the tug was some 600 feet east of the west end of the piers, but for some reason the slack was not taken up rapidly enough to prevent bight or loop in the line, and the schooner, at that time proceeding a little more rapidly than the tug, ran up upon the line and got so near to the tug that the slack in the towline was in the water under the bow of the vessel. By this time the tug had gotten, as asserted by the one party, some 250 feet eastward of the life-saving station, when she signaled the schooner to make fast the line, and when at about the corner of the west end of the pier, she hauled to the northwest to swing the vessel up the Milwaukee river, signaling the schooner to put her helm hard a-port, which signal was answered that the helm was hard a-port. There is dispute whether this signal was given; the tug asserting that it was not as stated, the schooner asserting that it was not given. According to the claimants, when the tug went across the bow of the schooner, for some reason the latter did not answer to her helm, the line was caught on the bobstay plate and cut, and the schooner, proceeding without control, collided with Benjamin's dock, and sustained injury. According to the schooner, when within 150 feet of Benjamin's dock, and not until then, the tug hauled to the northwest, and started ahead at full speed across the bows of the schooner, and without signal, and fetched on the line with a sudden jerk, and it parted; the schooner colliding with Benjamin's dock "a little on the port bow,—a little; not exactly stem on." The libel was filed to recover the damages sustained, and the negligence alleged is this: "That when the tug had towed the vessel to a point within about one hundred and fifty feet of the said H. M. Benjamin's coal dock on the west bank of the river, said tug, without orders, notice, or directions to those on board of the vessel, suddenly changed the tug's course to a point east of north, and said tug shot across the bow of said vessel with great force and speed. That as soon as the tug changed her course from a point west to a point somewhere east of north, the greater portion of the towline became slack in the water, and when the tug shot across the bow of the schooner aforesaid, going at full speed, she fetched up on the towline with a tremendous jerk, and parted it; and in spite of all efforts that were made or could be made by the officers and the crew of the Gifford to prevent it (the Gifford being so close to the dock known as 'H. M. Benjamin Coal Company Dock') that she ran into said dock and coal shed standing thereon." The court below dismissed the libel, and the libelant appeals.

TOLEDO WINTER MOORINGS.

The following vessels are wintering at Toledo: Steamers—George J. Gould, S. C. Reynolds, John C. Gault, Russell Sage, David W. Rust, Superior, J. S. Fay, Sarah E. Sheldon, Saginaw, Volunteer, Gettysburg, Sakie Sheppard, Metropolis, Douglas, Messenger, Swansea, Visitor, Grandon. Schooners—P. B. Locke, Arthur, W. H. Rounds, St. Peter, Thomas Dobbie, W. H. Badger, Maumee Valley, Tokio, J. A. Francombe, Mineral State, William Brake, H. C. Sprague, William Case, Fontana, Massasoit, J. I. Case.

MINIATURE TIDAL WAVE.

A report from Sheboygan, Wis., says that on Dec. 30, a tidal wave swept over the river, and many vessels in winter quarters received a severe shaking up. The wave followed the southerly gale that prevailed the day before.

The steamer Seymour was torn from her moorings, and was dashed against the schooner Rosa Bell, the violence of the collision swinging the schooner around in such a manner that her jibboom struck the pilot house of the Seymour. The schooner Ida Olson, of Green Bay, was pounding so heavily that it was necessary to take the vessel to a new mooring place farther up the river. Other vessels were torn from their moorings and dashed against the rock with great force. This makes the second wave in three weeks. The first one was less violent.

FUELING STEAMBOATS.

Lake vessel owners have not been alone in their fight against charterers claiming fueling privileges, although it must be said that the fueling companies acted all through for the best interests of their patrons during the coal miners' strike last summer, and made strenuous efforts to provide coal without increasing the cost to any great extent. The following from our London exchange the Shipping World clearly indicates the abuse prevalent on the other side of the Atlantic :

"The prevailing practice of supplying coals for steamers' use is most unsatisfactory. It was hoped that it had been abolished under the terms of the new charter, but it is not so, and some charters still compel shipowners to accept the following clause in their charters, viz. : 'The steamer shall purchase from the charterers all coal required for bunkers at 13s. per ton of 20 cwt., or in lieu thereof pay the said charterers 2s. 6d. per ton fittage.' Why shipowners should be expected to pay 13s. per ton for coal that is not worth 8s.—for it is well known that the vilest rubbish, only recognizable by its colour, is occasionally supplied for ships' bunkers under such unfair conditions—or why the ship should pay the charterers 2s. 6d. per ton for absolutely nothing is more than we can understand. We have heard many complaints of the abuses of coal charters, but the system is still permitted by shipowners, who, in individual instances, undermine the efforts of those of their body who strenuously oppose such objectionable and runious conditions. Unless this vital question is seriously taken up by shipowners there is not much hope of remedying such grievances."

THAT HISTORICAL WRECK.

MUNISING, MICH., Jan. 4, 1898.

To The Editor of The Marine Record:

I have read or heard of some lines written in the French-Canadian dialect about the loss of a barge or schooner. I am informed that the MARINE RECORD printed this poem about ten years ago. Can you trace it up for me?

SUBSCRIBER.

WRECK OF THE JULIE PLANTE.

A LEGEND OF LAC ST. PIERRE.

On wan dark night on Lac St. Pierre
De win' she blow, blow, blow.
An' de crew of de wood scow Julie Plante
Got scare and run below—
For de win' she blow lak' hurricane
Bimeby she blow some more.
An' de scow bus' up on Lac St. Pierre
Wan arpent from the shore.

De Captinne walk on de front deck,
An' walk de hin' deck, too—
He call de crew from up de hole
He call de cook also
De cook she's name was Rosie,
She come from Montreal,
Was chambremaid on lumber barge
On de Grande Lachine Canal.

De win' she blow from nor' eas' wes'.
De sout' win' she blow, too,
W'en Rosie cry, "Mon Cher Captinne,
Mon Cher, w'at I shall do?"
Den de Captinne t'row de big ankeere,
But still de scow she dreef,
De crew he can't pass on de shore
Becos' he los' hees skeef.

De night was black lak' wan black cat,
De wave run high an' fas',
W'en de Captinne tak' de Rosie girl
An' tie her to de mas'.
Den he also tak' de life preserve
An' jump off on de lak',
And say "Goodby, ma Rosie dear,
I go drown for your sak'!"

Nex' morning very early
'Bout ha'f-pas' two—t'ree—four—
De Captinne—oscow—an' de poor Rosie
Was corpses on de shore,
For de win' she blew lak' hurricane
Bimeby she blew some more,
An' de scow bus' up on Lac St. Pierre
Wan arpent from de shore.

MORAL.

Now all good wood scow sailor man
Tak' warning by dat storm
An' go an' marry some nice French girl
An' leev on wan beeg farm.
De win' can blow lak' hurricane,
An' s'pose she blow some more
You can't get drown on Lac St. Pierre
So long as you stay on shore.

—W. H. Drummond's own version in "The Habitant and Other French-Canadian Poems."

We presume that the foregoing is what subscriber asks about, if not and he can give us any further clue we will endeavor to reach it.—ED.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, furnishes the RECORD with the following particulars regarding Eastern freights: The light list of charters for steamers shows the holiday character of the week, and bears out our anticipation of the absence of belated shorts for the turn of the month. The only item of interest in grain charters is the fixture of a sailing vessel of 7,000 qrs., from Philadelphia to Cork f. o., at 3s. 1½d. and an intimation that this trade might be duplicated at 3s. 3d. So far no indication points to a resumption of active shipments after the new year sets in, and our anticipations are confined to the wish. For cotton, the Atlantic cotton ports show some enquiry, January loading at from 36s. @ 37s. to U. K. or Continent, 40s. @ 41s. Baltic. We have no fresh charters for case oil or for timber from Gulf ports to point to.

The year closes on our market for sailing vessels as a rather quiet one, but, on the whole, firm. Tonnage remains somewhat scarce, and, in consequence, shippers, who were in pressing need of prompt vessels, had to pay higher rates, which is more particularly referable to charters to the Colonies. For later months such rates are not now obtainable. Nothing has been done in case oil to the East, but rates are firm. Vessels fit only for barrel oil, on the other hand, in the absence of any active demand, had to accept lower rates. The business in lumber to South America, in timber and deals for Europe and in naval stores has again been light, but rates remain without appreciable change.

THE COMMERCE OF BUFFALO.

The arrivals and clearances at the port of Buffalo were larger in number during the season just closed than for many years, and the tonnage of the vessels engaged in this great carrying trade is the largest in the history of the port.

ARRIVALS AND CLEARANCES.

ENTERED.

CLASS.	No. Vessels.	Tons.
Coastwise vessels	4,517	5,414,047
American in foreign trade	985	324,756
Foreign in foreign trade	220	35,073
Total, 1897	5,752	5,773,876
Total, 1896	5,581	5,634,494
Increase, 1897	171	139,382

CLEARED.

CLASS.	No. Vessels.	Tons.
Coastwise vessels	4,704	5,625,831
American in foreign trade	894	153,937
Foreign in foreign trade	213	28,214
Total, 1897	5,811	5,807,982
Total, 1896	5,741	5,670,248
Increase, 1897	70	137,734

The following shows the aggregate number of vessels entered and cleared, and their tonnage for the years named:

YEAR.	No.	Tonnage.
1897	11,563	11,581,858
1896	11,321	11,287,526
1895	9,975	9,612,423
1894	9,664	8,789,902
1893	10,653	9,494,559
1892	11,479	9,550,922
1891	10,869	8,928,763
1890	9,762	7,556,413
1889	9,021	6,906,249
1888	8,647	6,026,890
1887	8,845	5,298,720
1886	7,772	4,753,467
1885	6,394	4,195,878
1884	7,539	4,386,575
1883	7,099	4,150,782
1882	7,333	4,405,003
1881	6,745	4,536,223
1880	10,308	5,905,747

The tonnage of vessels owned at the port of Buffalo is shown by the following table:

CLASS.	No.	Tonnage.
Sail	29	13,984.23
Wooden steamers	200	74,056.95
Iron steamers	44	73,759.89
Canal boats	7	989.10
Wood barges	15	2,384.73
Iron barges	22	27,485.08
Sail yachts	1	41.64
Steam yachts	5	276.19
Total, 1897	323	193,877.81

The total receipts of grain at Buffalo were 201,651,280 bushels, divided as follows: Wheat, 56,142,718 bushels; corn, 57,741,741; oats, 65,482,925; barley, 14,823,919; rye, 7,459,977. Added to this is 12,638,725 barrels of flour, making a grand total, figuring flour as grain, of 264,844,905 bushels, exceeding the season of 1896, which beat all previous records, by nearly 50,000,000 bushels in the aggregate, and by 38,219,466 bushels actual grain receipts. The season's average rate on wheat from Chicago to Buffalo was 1.5c., and from Duluth, 1.7c.

Iron ore receipts show a good gain over 1896, and receipts of pig iron are nearly double those of that year. Copper receipts are less than the total of 1896, but slightly exceed the figures of 1895 and 1894.

COAL SHIPMENTS.

At one time during the past season it looked as though coal shipments would fall far below those of 1896, but during the month of November nearly 500,000 tons were shipped, which brought the total up to 2,234,329 tons, less than 200,000 tons below the figures of 1896.

The ruling rates of freights in cents per net ton, free in and out, on coal by lake from Buffalo to Chicago were 25c. from the opening of navigation to May 22; 20c. to October 2; 30c. to October 9; 40c. to November 6; 50c. to November 13; and 60c. to close of navigation. The rate to Milwaukee was identical and subject to the same changes. To Duluth, from opening to October, 20c.; to November, 30c.; to close, 60c. To Toledo, 20c. to November; 30c. to close of season.

Shipments of grain from Buffalo by Erie canal for the season of 1897, compared with previous years:

	1897.	1896.	1895.
Wheat, bu	5,637,101	13,487,385	8,760,711
Corn, bu	10,815,843	3,204,012	2,986,088
Oats, bu	3,059,713	12,147,062	5,344,486
Barley, bu	2,803,753	4,274,766	2,966,021
Rye, bu	1,532,211	2,755,771	7,307
Totals, bu	23,848,621	35,868,906	20,064,613
Flour, bbls	7,947	64,552	900

SHIPBUILDING ON THE PACIFIC COAST.

At the Union Iron Works, of San Francisco, twenty-nine hundred men are engaged in the work of building ships. Several ships great in dimension and power are in course of construction. The battleship Iowa is doubtless one of the best ships afloat. The Scots are building a ship-of-war equal in all respects to the Iowa, and on some lines a superior ship. The battle-ship Wisconsin, on the ways at the Union Iron Works, is of the same class as the Kearsarge, Kentucky, Illinois and Alabama. Her coal capacity is equal to a cruise of 6,000 miles at 10 knots an hour. In the number of guns, the battery of the Wisconsin may be superior to that of the Iowa, but in this respect neither ship surpasses the Oregon. The battery of the Oregon, consisting in part of four 13-inch guns and eight 8-inch guns, is one of the most formidable afloat. It is too early to figure on the exact time for launching the Wisconsin, but the event will take place some time in the year 1898. The first big launching at the Union Iron Works will occur during the latter part of January next. Then the new Japanese cruiser, Chitose, will go to the water.

THE ERIE CANAL IMPROVEMENTS.

The Erie canal was built seventy years ago at a cost of $7,000,000. For the construction and improvement of its three principal canals—the Erie, Oswego and Champlain—the state has expended $63,000,000.

The state engineer now discovers that to deepen the two former to a uniform depth of nine feet and the Champlain canal to depth of seven feet, 456 miles in all, will cost $16,000,000, or more than one fourth of the total expenditure for the original construction and for all the improvements since the completion of the Champlain in 1819, of the Erie in 1825 and of the Oswego in 1828. Further, that contracts have been made that will call for the expenditure of $7,121,812 of the $9,000,000 which the people authorized the state to borrow for this improvement, and that $7,000,000 more, over and above the present authorized bond issue, making $16,000,000 in all, will be required to complete the work. Surveys made by engineers two years ago showed that the work would cost $16,000,000 instead of nine, and it is now thought that it was a very singular proceeding or miscalculation that could mininize the cost of improvements to a total of only $9,000,000.

A NEW ST. LAWRENCE RIVER LINE.

A new steamship service for the St. Lawrence will, it is reported, be run in connection with the Richelieu and Ontario Company next season. The new line is to be operated by Folger Bros., of Kingston, who have purchased the Shrewsbury, and intend to run her between Clayton and Montreal with the steamer America, thus reviving the active condition of opposition which existed in 1852, when there were two lines running down the St. Lawrence. It is the intention that the Shrewsbury shall connect with the New York Central Railway system at Clayton, and it is possible that the Folgers may put on two new boats now running on the upper lakes, to ply between Toronto and Clayton, there to connect with the Shrewsbury and the America. The Shrewsbury will be altered considerably. She is to be lighted by incandescent lights, and several staterooms will be added, it being the intention of the new owners to use her exclusively as a passenger steamer.

COMMERCE OF THE CUYAHOGA DISTRICT.

PORTS OF CLEVELAND, LORAIN, FAIRPORT, ASHTABULA AND CONNEAUT.

An increase of $14,322,228 in the lake commerce of the five ports comprising the Cuyahoga custom district is shown by the annual report issued by the Collector of Customs. The aggregate valuation of the traffic by water during the calendar year reached $80,368,086 as compared with $66,045,858 for 1896. The total coastwise receipts amounted in valuation to $27,411,390, shipments to $19,871,384, foreign exports $1,160,903.

Lorain—Coastwise receipts $1,352,631, shipments $485,684, foreign exports $243,972.

Fairport's coastwise receipts amounted to 1,447,249 net tons, valued at $10,943,868. Iron ore receipts were 1,443,165 tons, and wheat receipts 85,976 tons. Coastwise shipments were 225,588 tons, the value being $4,322,886. Coal shipments were 185,318 tons. Fairport did not receive or ship to foreign ports.

Conneaut's coastwise receipts—Iron ore, 551,217, $1,368,697; lumber, 1,200, $18,000; stone, 13,521,$9,465; total, 565,938, $1,396,162. Coastwise shipments.—Coal, cargoes, 28,970, $65,188; coal, fuel, 1,333, $2,666; coke, 200, $600; total, 30,503, $68,454. Conneaut's foreign imports were 1,830 tons. Foreign exports were 132,039 tons, valued at $385,236.

Ashtabula's coastwise receipts were valued at $8,420,587, shipments, $2,576,920; foreign imports were 1,625 tons, valued at $137,162.

Total entrances for the district, coastwise and foreign—Sail vessels, 1,949, tonnage, 1,925,710; steam vessels, 4,483, tonnage, 5,149,725; total number vessels, 6,432, tonnage, 7,075,435.

Total clearances for the district, coastwise and foreign—Sail vessels, 1,960, tonnage, 1,910,982; steam vessels, 4,580, tonnage, 5,259,324; total number vessels, 6,540, tonnage, 7,170,306.

Total entrances and clearances for the district, coastwise and foreign—Sail vessels, 3,909, tonnage, 3,836,692; steam vessels, 9,063, tonnage, 10,409,049; total number vessels, 12,972, tonnage, 14,245,741.

Total coal shipments of the district during the year 1897: Coal, cargoes, 2,045,606 net tons; coal, fuel, 567,639 net tons. Total, 3,613,245 net tons; total for 1896, 3,863,645 net tons.

Total ore receipts for the district during the year 1897: Ore, 7,354,828 gross tons; total for the year 1896, 6,166,236 gross tons.

Total number of tons of freight received and shipped in the district of Cuyahoga during the year 1897 was 13,620,076 net tons.

The total value of shipments and receipts, coastwise and foreign, to and from the district during the year 1897 was: Coastwise receipts and shipments, $76,859,959; foreign receipts and shipments, $3,508,127; total; $80,368,086. Total for the year 1896, $66,045,858.

The recapitulation of the year's records, when compared with former years, shows the growth of the commerce of the district. In the following figures the tonnage entering and clearing, and the valuation of the commerce of the five ports are given. The growth has not been gradual, as the record states:

1890—Tonnage, 7,661,269; value, $50,691,003.
1891—Tonnage, 8,526,237; value, $48,815,829.
1892—Tonnage, 11,482,173; value, $64,565,555.
1893—Tonnage, 8,833,260; value, $49,280,202.
1894—Tonnage, 8,978,381; value, $55,441,021.
1895—Tonnage, 11,821,497; value, $65,822,398.
1896—Tonnage, 12,096,618; value, $66,045,868.
1897—Tonnage, 13,620,076; value, $80,368,086.

The following is a list of the vessels built and added to the tonnage of the district during the year of 1897, the gross tonnage being given: Steamer Andrew Carnegie, steel, 4,106.55; steamer Minneapolis, steel, 2,029.41; barge Amazon, steel, 3,599.09; steamer St. Paul, steel, 2,029.41; schooner Antrim, steel, 3,200.49; barge Polynesia, steel, 3,562 09; schooner Constitution, steel, 3,231.30; barge Australia, steel, 3,745.17. Total, 8 vessels, 25,503.51.

The following is a list of vessels formerly belonging to other districts and sold to parties belonging to the district of Cuyahoga during the year 1897: schooner Surprise, wood, gross tonnage, 222.86; schooner Lucinda Lozen, wood, 35.12; schooner Aberdeen, wood, 1,045.84; schooner Dundee, wood, 1.043.87; tug Erastus Day, wood, 69.54; fish steamer Grayling, wood, 9.48; schooner Josephine, wood, 29.97; schooner-steamer Adventure, wood, 141.72; side-wheel yacht, Andrew Johnson, wood, 310.49; barge Huron, wood, 210.82; schooner-steamer Rhoda Emily, wood, 570.33; steamer Daisy, wood, 18.01; steamer Ohio, wood, 209.52. Total, 13 vessels, 3,917.57 tons.

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THIS year the Navy Department asked for the support of sixteen branch hydrographic offices including three new offices on the lakes, the sum of $30,000, or about $1,875 for each office. Last year the running expenses of the twelve offices then in operation, amounted to $17,000 or about $1,417 for each office. But the committee has reported to the House, the Legislative, Executive and Judicial appropriation bill for 1898, and it appropriates but $21,000 for the maintenance of the sixteen offices to be in operation during the coming year, or only $1,313 for each office, a decrease from the amount appropriated last year. If this bill becomes a law, the Hydrographic Office will hardly be able to carry on the work on the same scale as heretofore, much less to extend the work as had been hoped by all who now reap the benefits of the office.

THE present year should see a more equitable ruling regarding grain shortages, and this can be done by a slight difference in the wording of bills of lading. The vessel earns freight on the quantity or amount of cargo carried, relative to the cago itself, the ship has only to transport it in like order and condition received and so make delivery. To ask the vessel owner to pay for a deficiency in cargo and to deduct same from the freight money, to receive pay for excess of cargo from the consignee, is dealing with a product over which the owner of the vessel has no actual ownership. Bills of lading could be so worded that the ship would be duly credited with the amount that she tallied out. In this connection when loading or discharging in smooth water the draft of a vessel ought to be carefully watched as frequently an extra few tons can be determined from the marks alone as shown by the mean draft, or that taken from each end of the vessel.

IF the reports from Washington are correct, the United States does not make a dollar by its refusal to pay the award on which Mr. Gresham had agreed with the Canadian cliaimants. On the contrary, we are now compelled to pay the $425,000 agreed upon, with interest, besides footing a considerable bill of expense in carrying the matter before a new international court. The principal point that was settled by the Paris tribunal against the United States was that the whole of the Bering sea is the common property of the nations, the high seas and neutral territory. The United States has passed laws on the assumption that we owned the sea. One of these laws forbade pelagic sealing within the Bering sea, and this inhibition extended to our own people. When the Paris decision made it plain that our seizure of the Canadian vessels found sealing within the forbidden limits was unlawful, Secretary Gresham conceded the point, and the lump sum of $425,000 was agreed upon to be paid to injured Canadians. Congress refused to pay this sum, and provided for the creation of another commission with the foregoing result. The United States has come badly out of this mix up and with little or no credit to those who have attempted to handle the subject.

A SINGULAR RULING.

As a result of a collision between the tugs Nelson and Pankratz off the Lake Michigan entrance to Sturgeon Bay canal at 3 a.m. on October 11 last, United States local inspectors of steam vessels at Milwaukee, Messrs. Fitzgerald and Chipman, suspended the license of Capt. Frank Tufts of the Nelson for a period of four months, dating from December 15, 1897. The testimony showed that Capt. Tufts of the Nelson had violated rule 6 through failure to sound passing signals—hence his suspension. It also showed that Capt. Templeton, of the Pankratz had been negligent in the matter of signals, but as he was the party who instituted the complaint the inspectors concluded that under the late ruling of the supervising inspector of the district they had no right to suspend or revoke his license. Though not perceptible perhaps to the average reader, the foregoing is one of the most ignorantly lenient, nonsensical and unjustifitable rulings that two men supposed to represent an important branch of the government service could possibly be guilty of. The penalty for the offence is a farce, that is why we have termed it nonsensical. The suspension extends over a period when navigation is closed, and when the license would not be used if in force. On the early opening of navigation, or say April 15, Mr. Frank Tufts, late master of the tug Nelson will again be Capt. Tufts. So much for the first part of the verdict, and now for the equity of the later finding. Capt. Templeton of the Pankratz, was admitted to be equally at fault, but, as he was the first to make complaint, received exoneration from all blame at the hands of the Milwaukee local inspectors of steamboats, and this action was said to be justified by the former ruling of the supervising inspector of the district. There is a good deal of the school-boy style of "please teacher, Johnny is pinching me" about this supervising inspector's style of rendering decisions. Johnny gets whipped, or in this case a burlesque is made of it, and Bobby who was equally at fault, or perhaps the greater culprit escapes, endorsed if not commended for being so truthful a tell-tale, and getting in the first complaint, hiding his own discrepancy by blaming another, and after due inquiry being made into the circumstances, patted on the back and called a good boy. Such inquiries into casualties involving loss of life or property, is not only useless but harmful. In this instance two men are found to have violated one ot the sailing and steering rules, the first is told not to sail or handle a boat during the period when navigation is impracticable, and the other, through getting in his accusation first is completely exonerated. It looks to us as if some technical ability, common judgment, or horse sense ought to be pumped into the locals, as well as the supervising inspector who could render such judgments.

THAT NIAGARA RIVER BRIDGE AGAIN.

Attention has been called to the movement again on foot to construct a low bridge across the Niagara at Grand Island.

Congressman Corliss, of Detroit, says that the project is now pending before the interstate commerce committee, of which he is a member. The application has been made for permission to construct a low bridge over Niagara river to Grand Island, and thence to the Canadian shore, and he is in daily receipt of letters from the local councils of wheelmen associations and other organizations urging his support of the measure.

The unobstructed navigation of our inland waters and the extension of commerce through the projected deep waterway to the sea is of inestimable value to the commerce of the Great Lakes, and a low bridge at the point located by this measure might prove a serious obstruction to the progress of shipping and transportation.

When a high bridge was projected over the Detroit river at an elevation of 140 feet the Buffalo Chamber of Commerce and other business organizations protested against the construction of a high bridge on the ground that it would interfere with the commerce of the lakes. Now we find the citizens of Buffalo pressing a measure that will interfere with commerce at that port.

The attention of the Lake Carriers' Association, the various Chambers of Commerce, shipping and other organizations is directed to this measure. It will be remembered that the scheme or project was vetoed at the last annual meeting of the Lake Carriers' Association when more information was asked for on the subject.

For the first time in many seasons there are no large carriers wintering at Escanaba, and only the small local owned tonnage are tied up there.

A WHALEBACK'S CRUISE.

When the monster steamer Great Eastern steamed into Bombay harbor a few decades ago, the natives, whose curiosity had been aroused to an enormous pitch, said no, that is not the Great Eastern, but only her tender, heralding the approach of the big boat as it were, and they gazed long and wonderingly for the bigger steamer to heave in sight.

To the coolies, hog meat is unclean, and among a very large sect they are considered to have lost caste at almost the approach of a hog, much less to touch or be touched by one.

How the American whaleback steamer City of Everett, the model of which is said to resemble a hog in snout and back, and which made the trip from San Francisco to Calcutta with a cargo of food for the starving Hindoos, was received, there is no record of but she is now on her way across the Atlantic, from Spain, with a cargo of ore for Charleston, S. C., where she is about due. After discharging her cargo at Calcutta, she made a trip to Madras with coal, and, returning to Calcutta, she loaded a cargo of jute for Valencia and Bilboa, Spain, via the Suez canal. Discharging the jute in Spain, she got a cargo of iron ore for the United States. It is noteworthy that this is the first voyage of the kind ever made by an American steamer, and it is further remarkable that the whaleback type should have been the model to show the Orientals how far American skill and enterprise or Occidental assurance can depart from the old beaten time-worn style or method of vessel construction.

TO MANN THE NAVY.

The plan adopted by the Navy Department last summer of establishing receiving stations at Duluth and other points on the Great Lakes resulted in recruiting the navy to its full strength. The department cannot now add another man without authority of Congress. The present force of the navy is 11,000 men and 1,500 apprentices and both classes are at a maximum.

Reports received at the Navy Department show that a large number of men on the Great Lakes desire to enlist. When the vessels now in course of construction are launched the navy will require an additional force of 5,000 men. Even vessels afloat are not properly manned. Secretary Long has a place for 2,000 additional men, and it is probable that Congress will provide for this number so that residents of cities bordering on the lakes who are anxious to serve their country afloat may be gratified in their ambition.

CHICAGO RIVER IMPROVEMENTS.

Relative to the contemplated improvements in Chicago river, Capt J. S. Dunham, president of the Chicago River Improvement Association has the following to say:

"Marine men do not wish to monopolize the river, nor to interfere in any manner with the free and speedy passage across it of those who have to use the bridges, as the interests are mutual and identical. Small and insignificant as our river appears to be it is the greatest single factor in the building up of the city; greater by many fold than railways or manufacturing. If the marine interests thus assist in making the community prosperous they must likewise be of material benefit to individuals. Now, I don't believe there is a conservative man who has studied the situation who will be willing to advocate the crippling of our ramified and constantly growing industries by closing the river and turning away the vessel interests. What is needed, for the benefit of all, is to encourage and develop and increase this feature to the greatest possible extent, but it must be done in a manner acceptable and fair to all concerned. It is not right for vesselmen to demand the tearing away of all bridges—and you don't find them doing so. Neither is it right for the opposition to go to the other extreme and insist upon fixed bridges, but this is just what has been done. It is the midle course which should be adopted.

"My idea is that the river should be improved so as to insure the speedy passage of all boats which may come into the harber. Deepen and widen the channel, replace the existing center-pier bridges with structures which do not impede navigation, and there will be an end to all complaint about delay to traffic. Make it possible for rivermen to do their work swiftly and it will be done that way, for it means a decided saving in time and money, and we are all anxious to have our balance on the right side of the ledger."

As a navigable stream the Chicago river is to an extent under control of the federal authorities—that is the federal government can say what must be done in the way of improvement, and the city pays the bills. Some time ago Colonel Wilson, Chief of Engineers of the United States Army, came to Chicago and took a trip down the river.

What he saw convinced him the center-pier bridges should be removed, the channel dredged out to a uniform depth of at least twenty-one feet, and widened so as to give a clearance of 150 feet in all bridge draws. Mr. Yerkes does not like the proposition, as it involves the lowering of the La Salle, Washington, and Van Buren street tunnels, through which he runs street cars, and reconstruction of the Lake street bridge, over which his West Side elevated road is operated.

But the work thus formulated by Colonel Wilson is already taking shape. The plans and estimates made by the city bridge engineer, under direction of the City Council, provide for the demolition of the bridges now in use at Rush, State, Dearborn, Clark and Wells streets, and the construction of bascule structures in substitution for them. To make these changes will necessitate an expenditure of $705,000, as follows: Rush street, $160,000; State street, $175,000; Dearborn street, $90,000; Clark street, $140,000; and Wells street, $140,000. This latter item is for the city's part of the bridge only. It is to be a double-decked structure, with a roadway on top for the Northwestern "L," and this company will pay its share of the additional cost thus incurred. Two plans for doing the work have been suggested. One is to issue long-time bonds, and with the funds thus secured make the changes as rapidly as possible. The other is to make haste slowly by utilizing such appropriations as the Council will pass from time to time, and confining the changes to one or two bridges a year. By this latter plan it is urged that serious interruption to traffic caused by a wholesale closing of streets can be avoided.

There are fifty-eight bridges on the main river and its branches, representing an original outlay of $3,135,909.87, and aggregating 2.81 miles in length. To replace them all with bascule structures will be the work of years, and involve an expenditure of many millions of dollars. But this is the end aimed for, and the authorities say it will be reached.

The most expensive bridge in Chicago is the "lift" structure at South Halsted street, in the construction of which $237,180.52 was spent. From this they run down in price as low as $1,500, the average for the big bridges like that in use at Madisou street being $110,000.

Dredging the river is a job which the federal authorities must take charge of. While the first efforts will be directed to securing a depth of twenty-one feet only, provision will be made for a subsequent excavation to twenty-six feet below datum, and the city bridge engineer in making his estimates for bridge changes has arranged for foundations to the maximum depth. In the past the government has been extremely niggardly in expenditures for river and harbor improvements in Chicago. The total expenditures in the last twenty years at this city foot up $1,247,999, which is insignificant when compared with the work done at other cities. The official figures, covering the twenty years from 1877 to the end of 1896, are:

CITY.	EXPENDITURE.
New York	$10,000,000
Galveston	6,379,625
Savannah	4,718,861
Charleston	3,759,543
Philadelphia	2,439,000
New Orleans	1,515,845
Chicago	1,247,999
Boston	1,173,250

The work done in this line in Chicago last year by the United States government comprised the removal of 113,328 yards of dredging from the main river and branches at an expense of $13,873.79. During the same period the government expended $30,568.82 in the dredging out of 295,402 yards from the Calumet river. Owners of dock property along the Chicago river spent in 1896 a total of $45,000 in removing 123,200 yards of obstruction on their own account.

AN AMERICAN-BUILT STEAMYACHT.

The magnificent steamyacht for which the Bath Iron Works a few days ago signed a contract is for Col. Oliver H. Payne, N. Y. Y. C., son of the late ex-Senator Henry B. Payne, of Cleveland. The new yacht will be the largest ever built in the United States, and is intended to be in the same class as the Varuna, Mayflower, Nahma and other steamyachts built abroad for American owners. She will be 300 feet long, 35 feet beam and have a draft of about 16 feet. She will be bark rigged. Triple-expansion engines will be supplied, and a single screw. It is required by the terms of the contract, it is said, that she must show a record of speed of 15 knots an hour under natural draft, for a 48 hours' trial. Her coal carrying capacity will be about 500 tons and work will be begun on the yacht at once, and be carried on with dispatch.

OSWEGO MARINE ENGINEERS.

Oswego branch of the Marine Engineers' Beneficial Association has elected officers for 1898, as follows: President, P. T. Perkins; vice president, F. L. Axtell; recording secretary, James Donovan; financial secretary, Robert Cronley; treasurer and corresponding secretary, Thomas Navagh; conductor, S. T. Axtell; doorkeeper, John Donovan.

MASTERS' AND PILOTS' ASSOCIATION.

The Grand Harbor American Association Masters and Pilots of steam vessels, will convene in Washington, D. C., on Monday, January 17. Headquarters for representatives will be in the Riggs House. It is expected that at this annual convention important matters will be brought before the Harbor.

A PUMPING OUTFIT.

The Calvin Company, Garden Island, Ont., have just received a large order of pumps from Seneca Falls, N. Y., for use in their business. Two large steam pumps for wrecking purposes costing $6,000 were received a day or two ago. At the present time the Calvin Company have one of the best wrecking and salvage outfits to be found at any lake port, and their reputation for successful work stands high among vessel owners and underwriters' agents.

INSPECTOR OF OARS.

There is room for some ridicule and fun at the expense of Representative Wm. Alden Smith, of Michigan, who has introduced a bill in Congress to provide for an inspector of boat oars upon all vessels under the flag. The inspector's duties would be to trot around from port to port, accompanied by his secretary, and examine all the boat oars on vessels in port, stamping each one that might be found ineffective as "condemmed." The bill provides a salary of $2,500 per year for the inspector of oars and $1,000 per year for his secretary, with expenses. The bill was labeled H. R. 4355 and was referred to the committee on merchant marine and fisheries. The framer of this bill ought to extend his sphere of usefulness. He might provide for the appointment of an examiner of sea cooks, or an inspector of accommodations for stewardesses on passenger steamers; or a connoisseur of condiments, to give the public assurance of proper food being supplied on all packets. Any of these or other things would be as good as an inspector of oars, which, by the way, seems to trend slightly upon the province of the inspectors of steam vessels. But if a man who ever has any use for an oar doesn't know enough about what he wants it for to look out that the article is good and serviceable, then it is his own fault if he is obliged to paddle his boat without oars. There are too many oars in the market nowadays to permit of a single inspector performing his work efficiently. —Marine Journal, New York.

Capt. Geo. L. Norton, editor of the Marine Journal, is about right in ridiculing this would-be inspector of oars. When the bill was introduced the RECORD was ashamed to see that it emanated from a Michigan representative, and thought that the asinine measure would be quietly pigeonholed. The argus-eyed conductor of the Marine Journal, ever on the lookout for marine legislation, sighted the foolish bill and scotched it before it had a chance to see daylight. Of course sailors like to use good sound oars, and an easy, supple oar is a pleasure to row with, but not too supple either. Yet, for Congress to give one man $2,500 per year to inspect all the oars in use in the country and another $1,000 for an assistant to see that he inspects them properly, is a little too rich for the times, especially when all the attendant expenses are also to be charged up. Wonder how many oars, material, finish and lasting qualities considered four or five thousand dollars would buy each year anyway.

PROF. HARRIS, of Cornell University, speaks highly of the gasoline launch for field work. During the summer he made long voyages along the American coast, and also on inland rivers and canals, in search of geological specimens. For this purpose he found his boat infinitely preferable to a steam launch. Any well-made boat, 30 feet long, with a six horse-power gasoline engine, will, he says, run 800 miles on two barrels of oil at a cost of a little over 1 cent a mile. With a few day's practice the handling of the engine is mastered, and one can navigate himself, no licensed pilot being required. There is no trouble about a boiler fire and getting up steam, and Prof. Harris thinks lightly of the danger of running a gasoline launch, providing proper care be taken. He thinks it will soon be recognized as one of the best-known means of taking a summer holiday, camping out and collecting naturalist's specimens.

A LAKE SUPERIOR PASSENGER LINE.

A movement is on foot for the organization of a lake transportation company to do business between Duluth, Superior and Marquette, with every prospect of it taking definite shape in the near future. The Marquette Mining Journal says: Next year promises to be a profitable one in this line, and the recent excursion from Houghton county to Duluth-Superior has certainly given an impetus to copperdom's trade with that city. The new movement is backed by prominent local and Duluth capitalists familiar with the business, who would undoubtedly make it a success. The plan is to build a steamer with a speed of about 18 miles an hour and have her make semi-weekly trips between Duluth, Superior and Marquette. Freight would not interfere with the boat making good time and regular trips. Special attention will be given to the passenger traffic, and it is believed the boat can be made popular in catering to this trade. That such a movement will meet with much favor there is but little doubt, as notwithstanding the many boats plying between these points there are but few that pay attention to the local business, which of late is gaining large proportions, and there is no doubt, that a boat making regular schedule trips would do a profitable business, as well as be of incalculable benefit to the jobbing industries of Duluth-Superior, which are said to be enthusiastic in favor of the proposition. During the regular season the boat would also give a series of popular excursions to the many points of interest on Lake Superior.

HOISTING AND DREDGING ENGINES.

J. S. MUNDY, of Newark, N. J., manufacturer of hoisting and dredging engines, etc., reports that his orders for hoisting machinery during the last three months have been more than double those of the corresponding three months of last year. He finds that the business inquiry has shown a much better feeling all along the line and thinks that we are on the verge of prosperous times. His works have been running almost full handed on orders, having turned out some large hoisting engines for heavy hoisting and wrecking barges in New York harbor; a 75 tons capacity hoisting engine for the Merritt & Chapman Derrick and Wrecking Co. and a 60 tons capacity hoisting engine for the Hudson River Lighterage Co., and being now engaged on a large engine of about 75 tons capacity for the New York Central & Hudson River Lighterage Co.

A SPEEDY YACHT.

THE 80-foot yacht Ellide, built for E. B. Warren, vice president of the Barber Asphalt Company, from the plans of Charles D. Mosher, says Engineering News, has made the astonishing record of 37.89 miles per hour. She thus beats the Turbinia's record of 37.7 miles per hour. The Ellide is 80 feet long over all, 8 feet 4 inches beam and 3 feet 6 inches draft. She is of composite construction, with a double mahogany skin, fastened by Tobin bronze bolts, and steel frames and scantlings. Five steel bulkheads divide the hull into six water-tight compartments, and there are in addition a number of copper air tanks. The motive power is a quadruple expansion engine, with 9, 13, 18 and 24-inch cylinders and 10-inch stroke. The Mosher boiler is practically that used in the new torpedo launches and in the submarine torpedo boat now building at the Columbian Iron Works in Baltimore. The speed trial trip mentioned was made on the Hudson river over a mile course measured by the U. S. Coast Survey, and this distance was covered in 1.35 minutes.

MILWAUKEE HARBOR IMPROVEMENTS.

Milwaukee wants a 20-foot channel so that the largest carriers can enter that harbor without trouble and wants the government to do the work. The following resolution was adopted by the Milwaukee common council Monday:

"Whereas, the tendency in shipbuilding is to continually increase in size and carrying capacity; and,

"Whereas, a large number of steamers experience great difficulty in entering the navigable rivers of our city, while quite a number of these modern structures of gigantic dimensions are unable to enter at all, owing to the fact that our rivers are being dredged to an average depth of only 17 feet; and,

"Whereas, this state of affairs is not only detrimental to the general interest of the city of Milwaukee, but is also injurious to outside interests, notably the marine on the great chain of lakes; and,

"Whereas, deepening the various channels to the required depth of 21 feet would necessitate the expenditure of a sum of money in excess of the ability of the city to raise at this time; and,

"Whereas, a number of cities along the lake that were similarly situated regarding their harbors and navigable channels successfully petitioned Congress for an appropriation; therefore,

"Resolved, by the common council of the city of Milwaukee, that the city attorney and city engineer be and are hereby most respectfully requested to draft a memorial to Congress setting forth and expressing in proper terms the urgent necessity of an appropriation sufficient in amount to deepen our waterways to the required depth, and submit same to this council for approval at an early date."

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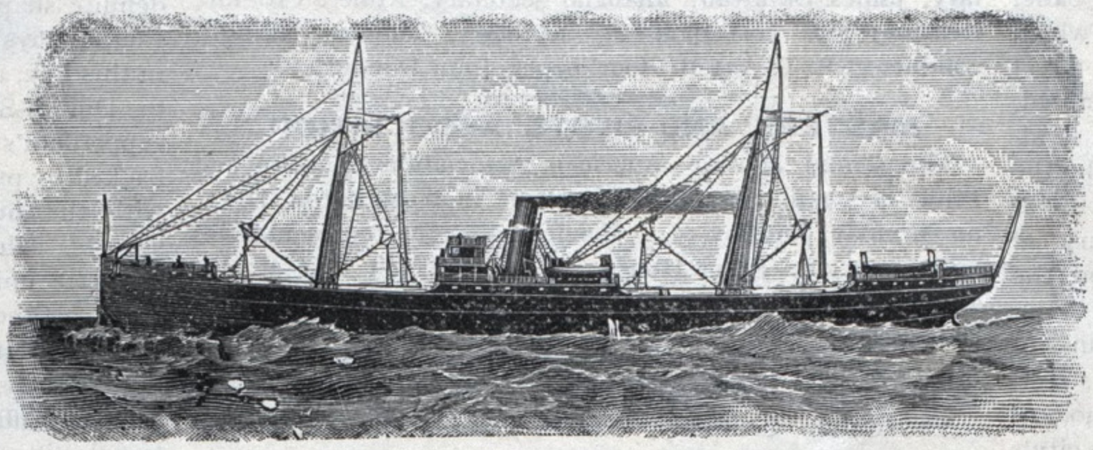

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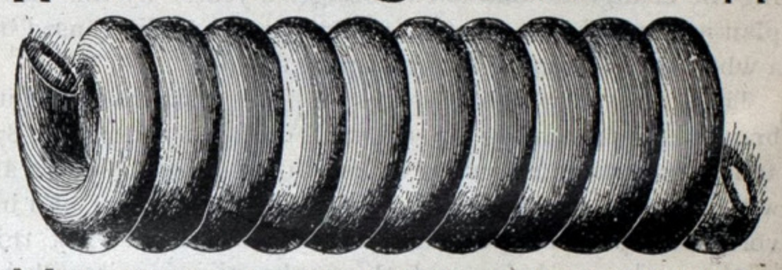

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ST. MARY'S FALLS CANALS.

The season of 1897 was one of unprecedented growth in Lake Superior commerce and cargoes to the amount of 18,982,755 tons passed through the two great ship canals of Sault Ste. Marie, Michigan and Ontario, the estimated value of the commodities carried being approximately $250,000,000. These commodities were carried by craft with an aggregate registered tonnage of 17,619,933. The banner year in canal history, 1896, was exceeded by 2,743,694 tons, the largest increase in any one year since the great water-ways were constructed around St. Mary's Falls. Aside from April, the opening month, and December, when the canals closed, the monthly traffic exceeded 2,000,000 tons, and frequently exceeded the total traffic of 1882, which amounted to 2,020,521 tons. Nothing could more strikingly show the magnitude and rapidity of growth of the Great Lakes commerce. The increase in registered tonnage over 1896 was 370,515. The number of passages was 1,444 less, owing to the greater carrying capacity of the vessels since the deepening of the channels. The canals were open 238 days this year. During the fourteen days of traffic in December, 6,076,433 bushels of wheat and 1,458,124 bushels of other grain were carried through, the total freight amounting to 432,959 tons, a record breaker for the month of December.

A VALUABLE AND WELL DESERVED PRESENTATION.

They seem to appreciate a life well spent in the service of a firm or company of ship-owners in a much greater degree on the other side of the pond than on this side, judging from a recent report contained in the Liverpool Journal of Commerce, and duly mentioned in other foreign periodicals received by the RECORD.

In this instance the senior master in the employ of the company was about to retire from sailing, and during his active service had so gained the esteem of those who had sailed with him that he was presented with an illuminated address, a marble clock, and a case of silver.

The presentation consisted of a complete suite of massive silver dinner service, spoons, forks, etc., in the old English pattern, enclosed in a dark oak case, each piece being engraved with the captain's crest, also a magnificent dining-room clock in black marble, with bronze mountings, and an illuminated framed address. The clock is designed in the pure Greek style of classic art, being a reduced model of the celebrated Acropolis temple at Athens. Two Greek Caryatide figures support the entablature, and there are bas-reliefs on either side of the dial, representing an ancient sacrificial offering. The clock is of massive proportions. A silver shield on a moulding at base bears the following inscription: "Presented to Captain Alexander McQueen by his fellow employes, on his retirement after 37 years' service in the Isle of Man Steampacket Company." It is not so stated but the inference is drawn that he was also superannuated by the steamboat company, for whom he had worked successfully for a life time.

IN WINTER MOORINGS.

The vessels laid up for the winter at Gladstone, Mich., are are as follows: Barges Thomas Gawn and Teutonic, steamers J. C. Gilchrist, Appomattox, City of Naples, J. A. Wright, and the tug Martin Swain.

A LARGE SHIPBUILDING ORDER.

The New York and Cuba Mail Steamship Company has completed a contract with the William Cramp Ship and Engine Building Company, Philadelphia, for five new 5,000-tons sixteen-knots twin-screw steamers. The plans of the proposed ships fully meet the government requirements for second-class auxiliary cruisers. One hundred and fifty first and second and from 100 to 150 steerage pasengers can be carried. Next to the St. Louis and St. Paul these will be the largest merchant steamers ever built in the United States.

WINTER FLEET AT ASHTABULA.

Steamers, C. H. Bradley, Corsica, Corona, German, Fred Kelley, Skater and Saxon; schooners, Mary Woolson, Brightie and Sandusky; barges, 201, 101, 130 and 132, and steam scows, Youghiogheny and Geo. B. Raser. This is the smallest winter fleet that Ashtabula has had in years. The local fleet of tugs, scows, etc., bring the total up to 24 steam craft.

THE increase in the lake receipts of anthracite coal for the season of 1897, as compared with 1896, as compiled by the bureau of coal statistics, is 85,922 tons. the figures are 1,312,693 tons for 1896 and 1,233,771 tons for 1897.

NOTES.

THE Tennessee Coal and Iron Railroad Company and the Sloss Iron and Steel Company, of Birmingham, Ala., shipped last week 5,000 tons of Alabama pig iron to Kobe and Yokohama, Japan. A trial shipment of Alabama iron made to Japan several months ago, gave such satisfaction that extensive orders are resulting, this shipment being the first of a series,

MR. CHARLES R. FLINT, of the celebrated exporting house of Charles R. Flint & Co., New York, says that the export of manufactured goods, especialy in iron and steel, is to be credited with bringing the aggregate value of this nation's exports for 1897 above the record of any previous year in our history. The exports will materially exceed a value of billion dollars and examination of details, Mr. Flint says the character of the exports is as gratifying as the aggregate value. Nowhere has there been such a change in the nature of our trade as in iron and steel. The value of imports of iron and steel in 1897 was less then half the value of 1891 and the exports were about twice as great.

APROPOS of the recent stranding in the North Sea of a wooden schooner buil as far back as 1793, the Nautical Magazine for December remarks that the Truelove, of 285 tons, built in the United States in 1764, lasted for 124 years. A brig, the Amphitrite, built in 1776 was turned into a coal hulk abouth 112 years later. Then there is the Robert, built in 1775, and still heading up for port after over 115 years' hard work. The convict ship Success was built of teak, in 1790, at Malmain, and came to England from Australia when over a hundred years old. Of warships, the good old Victory dates from 1765, built at Chatham; and United States Constituion has completed her centenary in state this year, having been built at Boston, Mass., in 1797. The Herefordshire and the Earl of Balcares, teak ships built in India, were more than a hundred years old on retirement.

CASSIER'S MAGAZINE OF ILLUSTRATED ENGINEERING has in its January number following articles: "The Largest Steamship Afloat." A complete description of the record breaker, "Kaiser Wilhelm der Grosse," by Gustav H. Schwab. "American Cable Ways in Open-Pit Mining," by Spencer Miller, M. Am. Soc. C. E. "The Blight of Trade Unionism," by Benjamin Taylor, F. R. G. S. "Dustless Buildings." The use of filtered air for hearing and ventilat-

ing, by C. J. H. Woodbury. "Carriage and Wagon Building on the Midland Railway, England," by Charles Henry Jones. "Electric Power in the Machine Shop," by E. H, Mullin. "An Ingenious Metallurgical Process." A new application of the flow of metals, by J. W. Meyjes. "A Record in Chimney Reconstruction," by E. D. Meier.

THE Hon. C. A. Parsons, the inventor of the system of marine propulsion by steam turbines, is about to construct, at Newcastle-on-Tyne, a vessel of the torpedo-boat destroyer type, which he estimates will be capable of easily going from 36 to 40 knots an hour. This speed is equivalent to some 46 miles an hour, and no craft (except the Turbinia) has yet been build capable of traveling at a faster speed then 32 knots an hour. At the Jubilee Naval Review this small experimental vessel (the Turbinia, 100 feet in length, 9 feet beam and 44½ displacement), fitted with three separate compound turbines directly coupled to the three-screw shaft, was run at speed up to 34½ knots an hour, thus proving herself the fastest vessel in the world. The shafts went at the rate of 2,230 revolutions per minute, and this exceptional speed was achieved without any sacrifice of economy. Mr. Parsons is now fitting the Turbinia with a stern-going engine which will give her a speed astern of ten knots; at present it is only three knots.

A STORY that parallels in a small way that of "rats and red tape" recently published here, is told of the experience of the head cook of the U. S. S. Iowa with red tape. He found that he could bake enough bread if he had a little bake oven erected in the galley. Application was made through the proper channels to the commandant of the New York Navy Yard, Commo. Bunce, for the oven. The commandant referred the request to the Bureau of Equipment, which authorized the expenditure, amounting to $40. It was necessary to erect a platform in the galley on which to place the oven, and to cut a hole somewhere for the smokepipe. The Construction Bureau found that if the pipe were inserted in a hole cut in the smokestack leading from the engine room the best outlet would be given. The Bureau of Steam Engineering maintained that it alone had the right to cut holes in smokestacks. After a long discussion, during which the Judge Advocate General was called in to give his views as to the legal rights of the two bureaus in the premises, matters were thus arranged by the Secretary: The Bureau of Equipment should purchase the stove and stovepipe, the Bureau of Construction should erect the platform on which the stove will stand, the Bureau of Steam Engineering should cut the hole for the pipe.—The Army and Navy Journal, Washington, D. C.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo	1,749.000	3.709.000	456.000	60,000	1,650,000
Chicago	10.983,000	14,964.000	1,930,000	599.000	813.000
Detroit	171.000	92.000	6.000	32.000	16.000
Duluth and Superior	2,096,000	1,675.000	1,148.000	1,009,000	524,000
Milwaukee	138,000	95.000	87.000	24.000	45,000
Montreal	90,000	64,000	469,000	52,000	25.000
Oswego	6.000	50.000			49,000
Toledo	447 000	532,000	297,000	26,000	
Toronto	52.000		13,000		38,000
On Canal			46.000		
On Lakes					
On Mississippi					
Grand Total	38,816,000	38,421,000	12,337,000	4.055,000	4,348,000
Corresponding Date, 1896	54,651,000	19,852,000	14,089,000	3,044,000	4.403,000

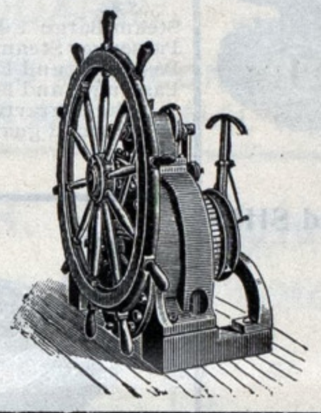
While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific slope.

STEAMERS FOR THE YUKON RIVER.

A corporation known as the Yukon Company has been organized for the purpose of carrying on transportation business between Seattle, Wash., and the interior of Alaska. The scheme to be carried out by the company is to employ a fleet of river steamers, to connect with the ocean steamers at the mouth of the Yukon and forward cargo and passengers into the interior. It is expected to put these steamers into service in the spring. A contract was let some weeks ago to Moran Bros.' Co., of Seattle, for the construction of 12 river steamers, 2 tugs and 24 barges to cost about $1,000,000. The Seattle Post Intelligencer gives the following principal data in the construction of these boats:

"The steamers are to be of the stern-wheel type. The six smaller ones, 190 feet long, will have twenty-inch cylinders with a seven-foot stroke. The six larger ones, 260 feet long by 40 feet beam, will have thirty-inch cylinders with a ten-foot stroke. The boats will be fitted throughout with electricity, powerful searchlights being part of the equipment. The tugboats, 120 feet long, will have fourteen-inch cylinders with a six-foot stroke. The tugs are for service at the mouth of the Yukon in towing lighters from the ocean steamships to the mouth of the river. They will be fitted with condensing engines enabling them to run in salt water. When the river steamers reach salt water they will be taken in tow. The idea is to save the boilers of the fresh water boats from damage by salt water. The sixty miles of ocean run has always bothered the river steamers heretofore. A feature of the plan of the boats is a large cold-storage plant with ice machines. This will make possible the carrying of fresh meats, vegetables, fruits and other perishable goods. Instead of driving cattle over the inland trail, they can be slaughtered in Seattle, the meats frozen and taken to Dawson in cold storage. The machinery is well under way and will be completed in three months. The entire contract will be completed by April 1, 1898. The boats and barges will be towed to the mouth of the Yukon river by ocean tugs."

Queen City Hydraulic Steerer.



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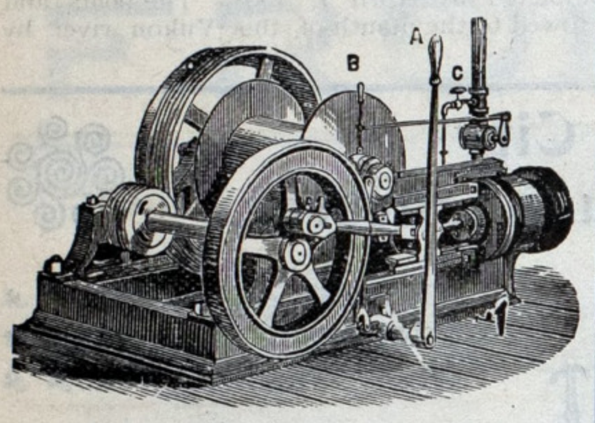

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Steamer Pine Lake, Charlevoix, 16 and 30x24.
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Steam Barge Luella H. Worthington, Cedar River, 19 and 36x30.
Passenger Steamer City of Kalamazoo, South Haven, 20 and 40x30.
Steamer Oval Agitator, Chicago, 14 and 28x20.
Tug E. G. Crosby, Muskegon, 16 and 30x24.
Tug Peter Coates, Sault Ste. Marie, 10 and 20x16.
Steamer Lorain I., South Haven, 12 and 21x16.
Passenger Steamer Lotus, Escanaba, 16 and 30x24
Steam Barge Sachem, Grand Haven, 21 and 38x36
Passenger Steamer Bon Ami, Saugatuck, 14 and 28x20.
Steam Barge Charles A. Street, Chicago, 20 and 36x36.
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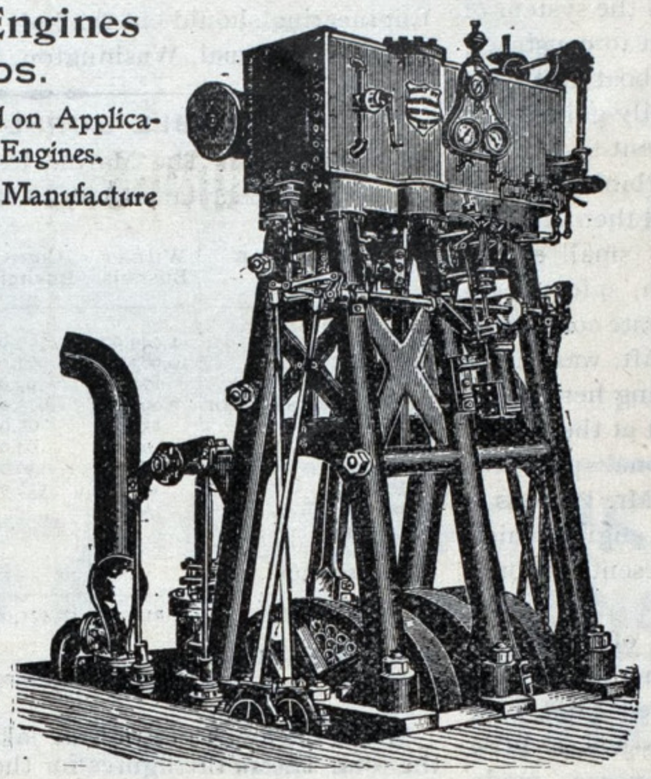
Passenger Steamer E. G. Maxwell, Pentwater, 14 and 28x20.
Passenger and Freight Steamer Bon Voyage, Saugatuck, 16 and 30x26.
Passenger and Freight Steamer Mabel Bradshaw, Muskegon, 26 and 28x26.



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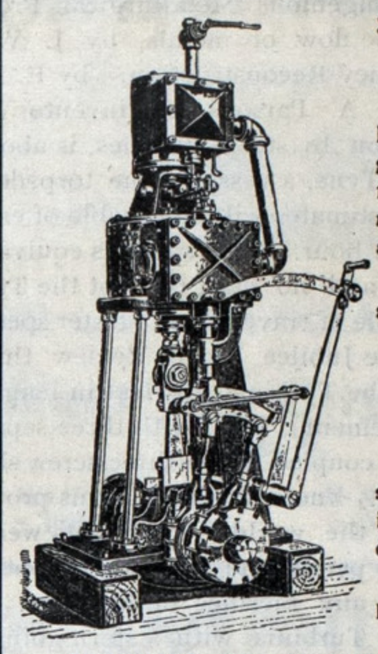

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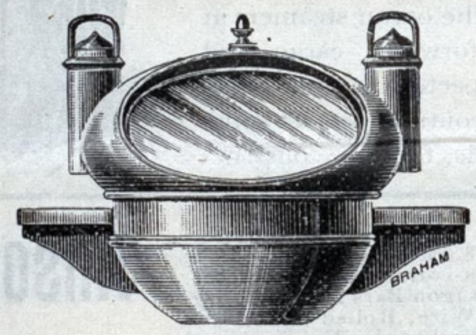

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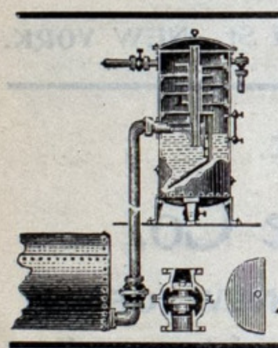

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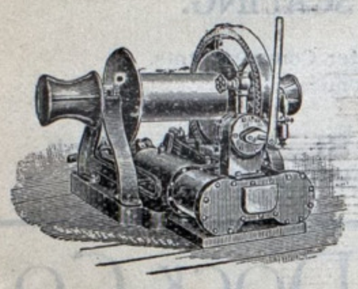

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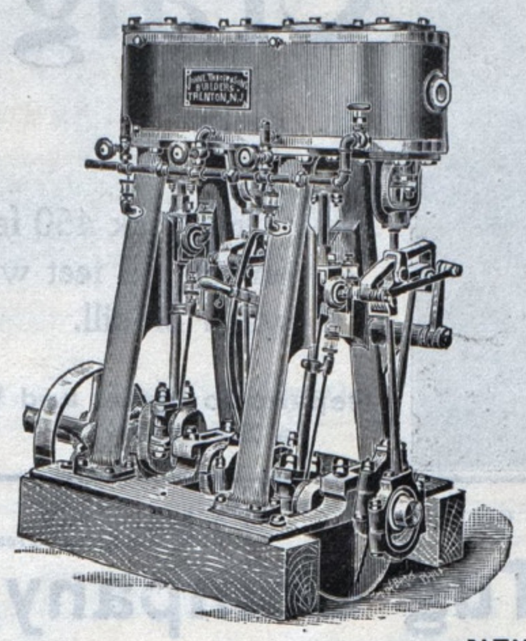

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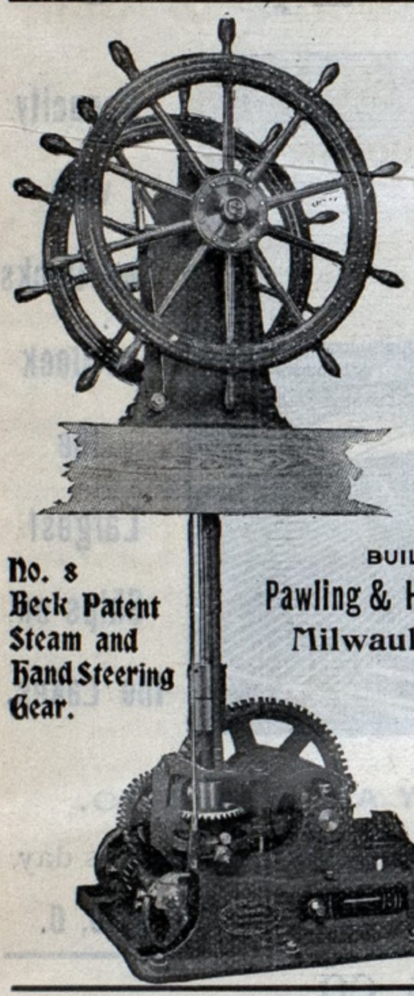

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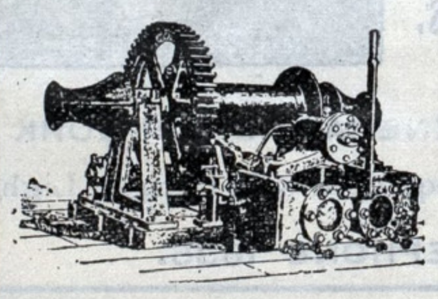

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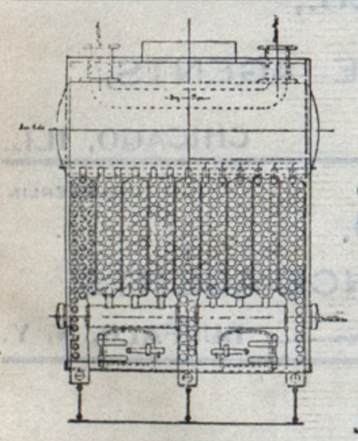

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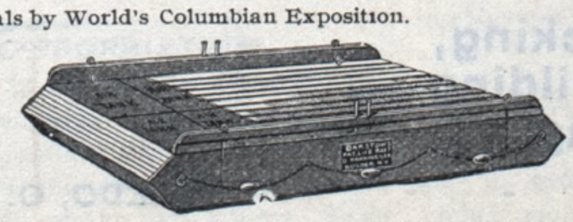

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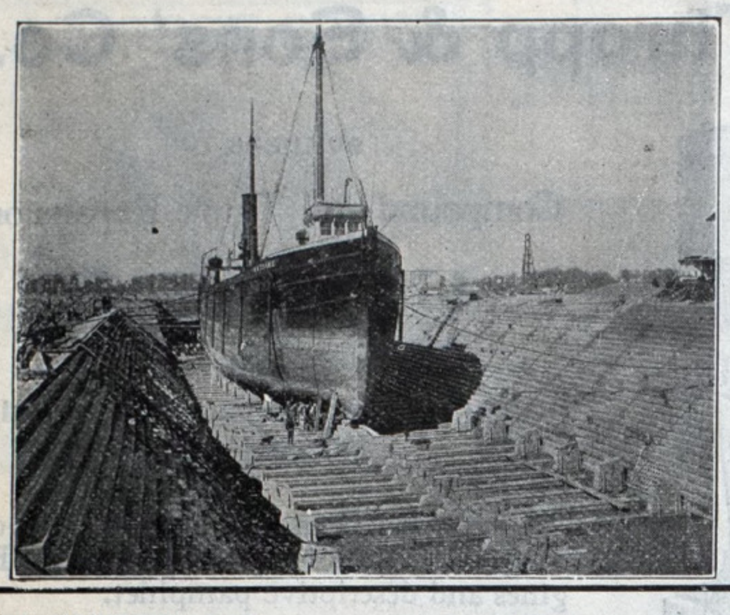

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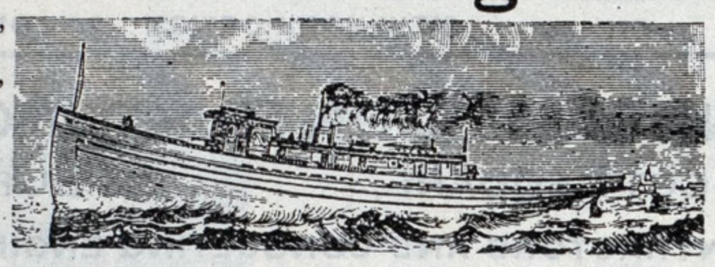

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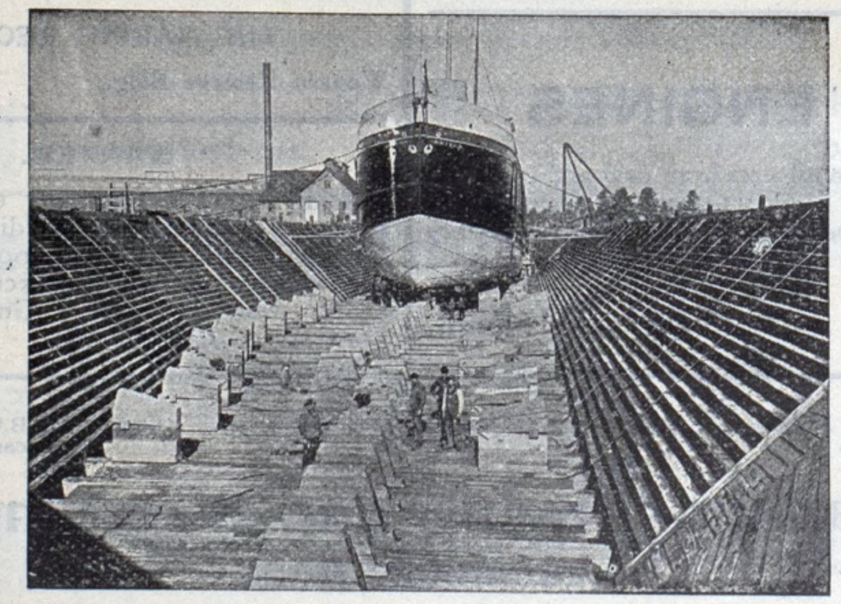

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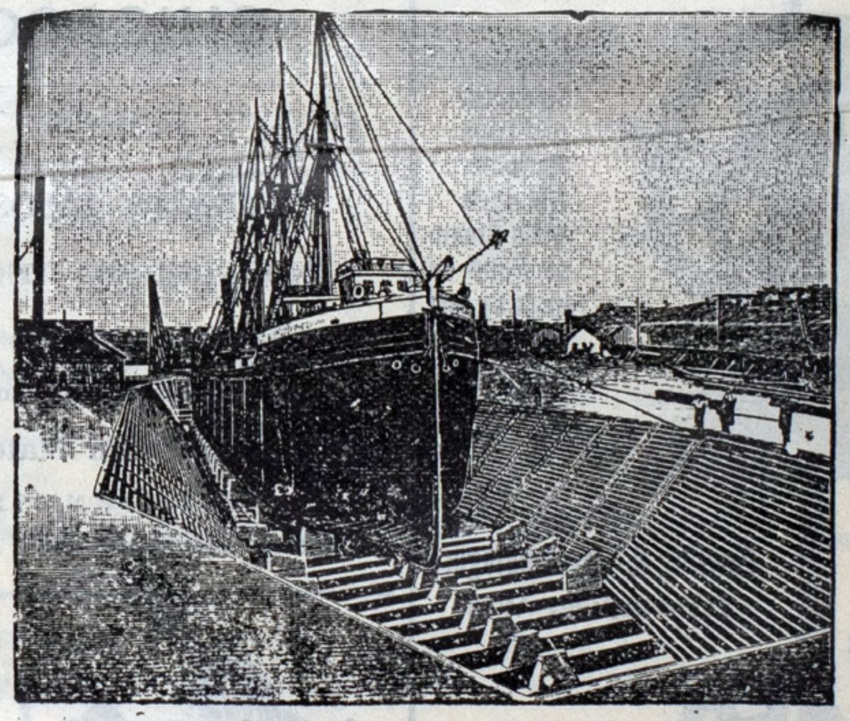

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